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Department of Agriculture

Grand Rapids Growers, Inc.

SEED MERCHANTS

*Specializing in Seeds
for the Market Gardener*

1931

**401-411 Ionia Ave. S.W.
GRAND RAPIDS, MICH.**

Grand Rapids Forcing Varieties

Always Dependable For Greenhouse Crops

The Grand Rapids Forcing Varieties are known and used in all parts of the United States and Canada as well as foreign countries, including England, France, Germany, west coast of Africa, Australia, etc., by leading greenhouse vegetable growers and market gardeners who have found them to be the best in their class and acclaim their praise. If you are still unfamiliar with their merits we would suggest that you send us a trial order. Below we give you a partial description, but the complete text will be found in the pages referred to in this catalog. We solicit your patronage. All mail orders filled on the same day they are received.

Lettuce

Grand Rapids Forcing (Washington Strain). A splendid forcing strain. Color a light green, heads very heavy; leaf crisp, tender and curly; quality of the best. Complete description will be found on page 14. Price, oz., 25c; $\frac{1}{4}$ lb., 75c; 1 lb., \$2.50, postpaid.

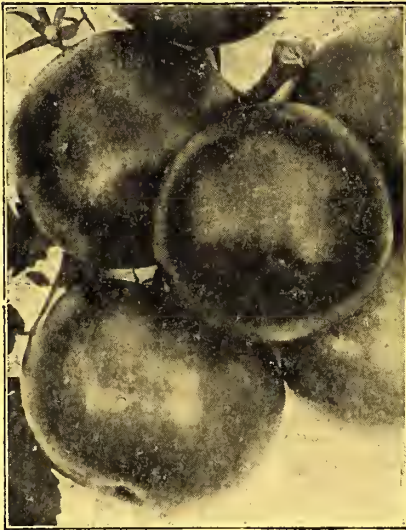
Grand Rapids Forcing (Ohio Strain). An exceptionally good strain of the old type of forcing variety; especially adapted to midwinter crop in the greenhouse. The leaf is dark green and curly. The quality very desirable. Complete description is found on page 14. Price, oz., 15c; $\frac{1}{4}$ lb., 40c; 1 lb., \$1.50, postpaid.



Grand Rapids Forcing Lettuce.

Radish

Grand Rapids Forcing New Improved. The best greenhouse variety and the earliest. Of the scarlet globe type but superior in every way for greenhouse forcing. Is very handsome with the shortest top. Full description will be found on page 20. Price, oz., 10c; $\frac{1}{4}$ lb., 30c; 1 lb., \$1.00, postpaid.



Grand Rapids Forcing Tomatoes.

Grand Rapids Forcing (Select Growers Strain). A superior Tomato, larger in size, better quality as well as flavor. Detailed description will be found on page 24. Price, oz., \$2.00; $\frac{1}{4}$ lb., \$7.50; $\frac{1}{2}$ lb., \$12.50, postpaid.

Cucumber

Grand Rapids Forcing (Improved Strain). A white spine selection. Long, slender, dark green variety. It is an ideal forcing Cucumber and will breed true to type. Full description will be found on page 12. Price, oz., \$1.50; $\frac{1}{4}$ lb., \$5.00; 1 lb., \$15.00, postpaid.

Tomato

Grand Rapids Forcing The intense sexual vigor of the plant causes a great production of pollen and insures an immense setting of fruit. It is self-fertilizing. The fruit is a good red color, fair size, firm and meaty. The skin is tough and it will stand shipping for long distances. The entire description will be found on page 24. Price, oz., \$1.50; $\frac{1}{4}$ lb., \$5.00; $\frac{1}{2}$ lb., \$8.00, postpaid.



Grand Rapids Forcing Radish.

An Unsolicited Testimonial

Fond du Lac, Wis.,
Feb. 18th, 1933.

Grand Rapids Growers, Inc.,
Grand Rapids, Mich.

Gentlemen: Permit me to express my appreciation of, and satisfaction with, your prompt service and high grade seeds. I am especially well pleased with Grand Rapids Forcing strains. Aside from their other good qualities, they always come true to type.

Respectfully yours,
RAY E. WOOD.

Grand Rapids Growers, Inc.

Seed Merchants

Grand Rapids

Michigan

ORDER SHEET—Continued[illegible]

SPECIAL NOTICE:

We shall esteem it a great favor if you will give us **in the spaces below the NAMES AND ADDRESSES** of any **Private Gardeners or Truck Farmers** among your acquaintances. We wish to send them our **SEED ANNUAL**

NAME	POSTOFFICE	COUNTY	STATE

Grand Rapids Growers, Inc.

Twelfth Annual Seed Catalog

1931

Important

By Carefully Following These Suggestions, Many Mistakes Will Be Avoided

Order Blanks

Order blanks have been inserted in this catalog for your convenience. Please use them. Fill in your NAME, POST OFFICE, SHIPPING POINT or nearest EXPRESS OFFICE, your COUNTY and STATE, as this is as important in the prompt filling of your order as the order itself. Write plainly and avoid mistakes.

Terms

Our terms are strictly CASH, and we ask that you enclose your remittance with the order. Unless your remittance is enclosed we will send your order C. O. D. and the charges will be added, but as the fee and cost of collecting seems to be an unnecessary item of expense, we cannot conceive why it is necessary to send goods in this way.

How to Send Money

Remittance should be made by Postal Money Order, Express Money Order, Bank Draft or Certified Check. It is perfectly safe, and your order will be assured of prompt handling. If currency is sent the letter should be "Registered."

Postpaid Prices

We prepay postage on all vegetable and flower seeds in packets, ounces, quarter pounds, half pounds and pounds at the prices quoted herein to any point of the United States or any of its possessions, and Canada, however, we do not pay postage on beans, corn, or peas beyond the "one pound" price; field seeds, onion sets, miscellaneous supplies, or anything that is not specifically listed "postpaid". If such items are wanted by Parcel post, add sufficient postage as per Parcel Post Rates given on this page.

Small Orders

Small orders are just as welcome as the larger ones and receive the same careful attention and prompt handling. All orders are filled the same day as received.

Large Quantities

Parties buying large quantities of any one variety of seeds will be quoted special prices on application. All prices are net.

Price of Seeds By Weight

We will supply HALF POUNDS and over at the pound rate; less than half pound lots are charged at the quarter pound and ounce rate.

Safe Delivery

All seeds and supplies sent out by us are fully insured and we guarantee their safe arrival. If there is any damage, notify us immediately.

Parcel Post Rates and Weight Limit

The weight limit within the first, second, and third zones is now 70 pounds, and within all other zones 50 pounds. Shipments of 20 pounds or over are cheaper if sent by Express beyond the third zone.

	1st lb. or Frac- tion	Ea. add. lb. or Fraction
1st Zone, within 50 miles of Grand Rapids...	7c	1c
2nd Zone, within 150 miles of Grand Rapids...	7c	1c
3rd Zone, within 300 miles of Grand Rapids...	8c	2c
4th Zone, within 600 miles of Grand Rapids...	8c	4c
5th Zone, within 1000 miles of Grand Rapids...	9c	6c
6th Zone, within 1400 miles of Grand Rapids...	10c	8c
7th Zone, within 1800 miles of Grand Rapids...	12c	10c
8th Zone, over 1800 miles from Grand Rapids...	13c	12c
Canada, all parts	14c	14c

If in doubt obtain your zone rate from your postmaster.

Non-Warranty

The seeds offered in this catalog have been carefully grown, selected, cleaned and tested for germination and we believe them to be first-class, but as so many conditions enter into making a crop, we give no warranty, either express or implied, as to description, purity or productiveness, and will not be responsible for the crop. If the purchaser does not accept the goods on these terms, they are to be returned at once, and the money will be refunded.

Grand Rapids Growers, Inc.

Seed Merchants

Cor. Wealthy and
Ionia Ave., S. W.

Grand Rapids, Mich.



Asparagus

CULTURAL DIRECTIONS. One ounce of seed will sow 50 feet of drill and produce about 200 plants. Drill the seed in rows about eighteen inches apart, covering seed one inch. Cultivate well, keep free from weeds and they should be all right to transplant to permanent beds the following Spring. The soil cannot be made too rich. Use well rotted stable manure or Pulverized Hen Manure, and mix well with the soil. For home garden have the rows two or three feet apart and a foot apart in the row. For field culture, the rows should be four feet apart. Make broad trenches about a foot deep and fill in about three or four inches with well rotted stable manure, put two inches of dirt on top of the manure, then set the plants, spreading the roots and cover with an inch of soil. As the plants grow, gradually fill the trenches till the bed or field is level. Do not cut the plants till the third year. Every Fall before the seed is ripe, cut tops and burn them, and give good top dressing of manure. Remember, the bed well planted will last for at least twenty years. Treat it well.

★ **Mary Washington Rust-Resistant Asparagus** The largest and most tender green Asparagus. This is a decided improvement over the Pedigreed Washington and Martha Washington, being earlier, larger and longer. The credit for the development of this wonderful, rust-resistant strain is almost entirely due to the untiring efforts of Prof. J. B. Norton, member of the Plant Breeding Staff of the U. S. Dept. of Agriculture. Oz., 25c; ¼ lb., 75c; 1 lb., \$2.50, postpaid.

Martha Washington (Pedigreed). The original rust-resistant type. A heavy yielding variety with long, thick, heavy stalks, closely folded at the tips; color rich dark green. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

Palmetto An early maturing and prolific variety with thick dark green shoots, distinctly pointed at the tip. A popular canning variety. Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.

Conover's Colossal A large fast growing green variety, very tender. Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.

Giant Argenteuil The popular variety in the Paris markets; early, exceedingly large and very productive. Oz., 10c; ¼ lb., 25c; 1 lb., 80c, postpaid.

Asparagus Roots

PALMETTO. One-year-old, \$1.50 per 100; \$12.00 per 1000, not postpaid.

MARTHA WASHINGTON. One-year-old, \$2.25 per 100; \$15.00 per 1000, not postpaid.

CONOVER'S COLOSSAL. \$1.50 per 100; \$12.00 per 1000, not postpaid.



★ Mary Washington Asparagus.

Beans

CULTURAL DIRECTIONS. One pound to 100 feet of drill; about three-fourths bushel per acre of Bush Beans. Beans thrive on a rich, warm, light soil. It is not safe to plant until about the middle of May as the seed will rot in cold, wet ground, and the plants will not stand frost. Plant dwarf beans in rows two feet apart and from four to six inches apart in the rows. Lima Beans should not be planted until June first, when the soil is thoroughly warmed through. Limas will rot in cold ground.

Wax Podded Varieties

Improved Golden Wax One of the earliest dwarf wax sorts. Pods flat, long, beautiful golden yellow, tender and stringless. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

★ **Pencil Pod Black Wax** Pods round, very long, tender, and entirely stringless. Extremely productive. Best market gardeners' sort. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

★ **Burpee's New Kidney Wax** A more vigorous and prolific grower than Wardwell's. Pods flat, brittle, fleshy, of a rich lemon color, stringless and well flavored. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Prolific Black Wax (Or German Black Wax). The earliest Wax Bean. Pods short, curved, slightly flattish. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Wardwell's Kidney Wax A very popular early gardeners' variety. Pods large, 5½ to 6 inches, moderately stout, straight and flat, fleshy, brittle, fine grained and nearly stringless. Of good quality and very attractive. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Davis Kidney Wax Seed white, pods very long, flat, straight, white, waxlike, and very attractive. If picked when young, the pods are tender and stringless but if left too long become rather hard. Extremely productive. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.



Davis Kidney Wax Beans.

★ This variety recommended by the Michigan State College.

WAX PODDED BEANS—Continued

★ **Unrivald Wax Beans** Small plant, very early and great yielder. Pods about five and one-half inches long. Somewhat curved, semi-flat, fleshy and very tender and stringless. Color pale yellow. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Green Podded Varieties

★ **Burpee's Stringless Green Pod** A very desirable dwarf, green-podded sort for either home garden or market. Pods 5 to 6 inches long, thick, fleshy, perfectly stringless. Tender and delicious. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Giant Stringless Green Pod Similar to Burpee's Stringless but pods are a little longer, straighter and more slender, more depressed between beans and slightly lighter in color; early, hardy and of highest quality. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Refugee or 1000 to 1 A very productive, hardy, vigorous late sort. Pods 5 to 5½ inches long, somewhat slender, round and slightly curved, almost stringless, and of good quality; color light green. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Bountiful Best of the flat-podded varieties. Pods 6½ to 7 inches long, thick, flat and slightly curved. Stringless and of fine quality, color light green. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Kentucky Wonder or Old Homestead The most popular green-podded, climbing Bean; early and productive. Pods 8 to 9 inches long, very slender. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Dutch Case Knife Pole Bean. Green snap pods, 7 to 8 inches long, straight, flat, brittle, of good quality; best as a shell bean. Beans very flat, ivory-white. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Lima Beans
Pole Varieties¹

King of the Garden Lima An improved strain, vigorous, midseason, productive. Pods 5 to 6 inches long, very flat and wide, and uniformly four-seeded. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Early Jersey Pole Lima (Sieberts). An early midseason variety. Very productive and highest quality. Pods 5 to 6 inches long; beans rather thicker than the King of the Garden, but of the same type. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Early Leviathan Pole Lima A very early, large-podded variety. The earliest of the large Lima class. Pods 5 to 6 inches long, containing 5 to 6 large, flat, white beans. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 1 bu., \$15.00.

Dwarf or Bush Varieties

Burpee's Improved Bush Lima Both beans and pods are larger than the old type. The pods measure 5 to 6 inches long by 1¼ inches wide and are of a luscious flavor. They are frequently borne in clusters of from five to eight pods. 1 lb., 40c, postpaid. Not prepaid, 10 lbs., \$3.50; 1 bu., \$18.00.

Fordhook Bush Lima A most excellent variety and exceedingly popular with market gardeners. Pods about 5 inches long, containing 4 to 5 large, oval-shaped, very thick, white beans. 1 lb., 40c, postpaid. Not prepaid, 10 lbs., \$3.50; 1 bu., \$18.00.

Henderson Bush Lima A vigorous, hardy, very early and small type of Bush Lima. Pods small, about 3 inches long, containing 3 to 4 small, flat, white beans. 1 lb., 35c, postpaid. Not prepaid, 10 lbs., \$2.50; 1 bu., \$14.00.

Beets

Cultural Directions. One ounce to fifty feet of drill. Five or six pounds per acre. Do not use stable manure if you want smooth Beets with but few roots. Beets thrive on deep, rich, sandy land. For early crop sow in drills one foot apart, cover seed one inch. Sow as early as the ground can be worked in the Spring. When plants are large enough to use as greens, thin to three inches apart in the row. Beets can be sown as late as July for main crop.

Early Wonder An early variety. It is turnip-shaped and is always smooth. The flesh is a beautiful deep red color and is of excellent quality. Tops are small and erect. Exceptionally good for early bunching. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.



Burpee's Bush Lima.



J. B. R. S. Co.

Detroit Dark Red.

★ This variety recommended by the Michigan State College.

BEETS—Continued

Detroit Dark Red The best for the market garden or home use. Roots uniformly smooth, of medium size and globe-shaped, skin dark red, flesh solid vermilion-red. Tops are small, upright, dark green, shaded red. Oz., 10c; $\frac{1}{4}$ lb., 25c; 1 lb., 75c, postpaid.

Crosby's Egyptian Where an early market sort is desired, our strain is unequalled. Roots a flattened globe shape, skin very dark red, flesh a trifle lighter, tops small. Oz., 10c; $\frac{1}{4}$ lb., 25c; 1 lb., 75c, postpaid.

Eclipse An early variety with small tops and medium sized, round, bright red roots; flesh bright red. Oz., 10c; $\frac{1}{4}$ lb., 25c; 1 lb., 75c, postpaid.

Early Blood Turnip, Improved The old standard table beet. Roots nearly round or slightly flattened, bright red, zoned and of good quality. Not so early as Detroit, but with a larger, coarser top. Oz., 10c; $\frac{1}{4}$ lb., 30c; 1 lb., \$1.00, postpaid.

Mangel or Stock Beets

CULTURAL DIRECTIONS. One ounce to fifty feet of drill, six pounds per acre. Sow early in the spring, in rows about two feet apart; cover seed one and one-half inches deep, pressing the ground firmly over the seed. When plants are three inches high thin to about eight inches apart in the row. The plants pulled may be used for greens.

Mammoth Long Red A favorite with the dairy-man and farmer. Large, well formed; dark red color, very nutritious; a big cropper. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 60c, postpaid.

Golden Tankard Very productive and sweet; tops and neck very small, flesh yellow, especially relished by cows and sheep. Oz., 10c; $\frac{1}{4}$ lb., 25c; 1 lb., 75c, postpaid.

Sugar Beets

Sugar Beets and Mangels are of great value for stock feeding, because of the improved health and condition of the animals, increased flow and quality of milk, and because of the saving in fodder. The yield is enormous, and the cost of growing is trifling. Grow a patch of them for Winter feed. They are also excellent for poultry.

Lane's Imperial Sugar A white fleshed handsome and productive variety, used extensively for making beet sugar. Oz., 10c; $\frac{1}{4}$ lb., 25c; 1 lb., 75c, postpaid.

Giant Feeding Sugar A most valuable, large yielding variety for feeding; half sugar, oval shaped, skin rose colored, flesh white, very nutritious and easily harvested. Oz., 10c; $\frac{1}{4}$ lb., 25c; 1 lb., 75c, postpaid.



Golden Acre Cabbage.



Italian Green Sprouting Broccoli.

Broccoli

Italian Green Sprouting This variety produces a large head, like cauliflower, consisting of a compact cluster of bluish green flower. When the central head is removed, the plant produces many branches, each bearing small heads. These are cut with 3 or 4 inches of the branch attached and tied in bunches for market. The stems as well as the flower heads are cooked and served as cauliflower. Oz., 75c; $\frac{1}{4}$ lb., \$2.60; 1 lb., \$10.00, postpaid.

Cabbage

CULTURAL DIRECTIONS. One ounce will produce about 2,000 plants; 10,890 plants will plant an acre of early cabbage; and 7,260 plants for an acre of late. Eight ounces of seed will plant an acre of early and four ounces an acre of late cabbage. For early cabbage, sow seed in hotbeds in January or February. Transplant as early as possible to the open ground about two feet apart each way. For late cabbage, sow seed in the open ground in May and transplant about July first in rows 2½ feet each way.

Earliest of All A new Danish introduction of the Copenhagen type, heads are perfectly round, solid and of uniform size. Fully 7 to 12 days earlier than Jersey Wakefield. Average about 4 lbs. each. Oz., 60c; $\frac{1}{4}$ lb., \$2.00; 1 lb., \$7.00, postpaid.

★ **Golden Acre** Heads round, very hard. As early as the Jersey Wakefield. Some claim it to be a week earlier. Matures two or three weeks earlier than Copenhagen Market, but is otherwise quite similar. Owing to earliness and remarkable uniformity, Golden Acre will prove the most profitable early cabbage for market gardeners. Oz., 40c; $\frac{1}{4}$ lb., \$1.25; 1 lb., \$4.50, postpaid.

Early Jersey Wakefield Market gardeners in general consider this the best early variety. The conical heads are very uniform in shape and very solid. Our stock is dwarf, compact and extremely early. Oz., 25c; $\frac{1}{4}$ lb., 90c; 1 lb., \$3.00, postpaid.

Copenhagen Market Nearly as early as the Jersey Wakefield. Stems short, heads large, round and solid, with few outer leaves. Oz., 30c; $\frac{1}{4}$ lb., \$1.00; 1 lb., \$3.00, postpaid.

All Seasons Heads large, round and very deep; can be planted for early or late crop. Good keeper. Oz., 20c; $\frac{1}{4}$ lb., 60c; 1 lb., \$2.00, postpaid.

Surehead Flat Dutch type; a splendid keeper. Oz., 20c; $\frac{1}{4}$ lb., 60c; 1 lb., \$2.25, postpaid.

★ **Danish Ballhead** Short stemmed, heads round, very solid and heavy. Splendid keeper, hardy, and the best Winter sort. Oz., 25c; $\frac{1}{4}$ lb., 90c; 1 lb., \$3.00, postpaid.

CABBAGE—Continued

Premium Flat Dutch Second early variety, highly valued for its fine quality. Heads very solid, broad, round, flattened on top, fine grained and tender. Oz., 25c; $\frac{1}{4}$ lb., 65c; 1 lb., \$2.25, postpaid.



Brussels Sprouts.

Brussels Sprouts

The culture is the same as for cabbage which it resembles. The edible part being the small heads, an inch or two in diameter that form at each leaf joint all the way up the stalk. The leaves should be broken off in the fall to give more room for the little heads to grow. Delicious and more tender than any cabbage. Half dwarf. Oz., 25c; $\frac{1}{4}$ lb., 90c; 1 lb., \$3.00, postpaid.



Swiss Chard, Lucullus.

Glory of Enkhuizen Excellent, medium early, short stemmed, heads large, round and very solid. A long keeping variety. Oz., 25c; $\frac{1}{4}$ lb., 90c; 1 lb., \$3.00, postpaid.

Henderson's Early Summer

Heads medium in size, round, somewhat flat, compact and solid. Ten days later than Jersey Wakefield and one of the best second early sorts. Oz., 25c; $\frac{1}{4}$ lb., 90c; 1 lb., \$3.00, postpaid.

Drumhead Savoy Very large, solid heads. Dark green, superior quality. Oz., 20c; $\frac{1}{4}$ lb., 60c; 1 lb., \$2.00, postpaid.

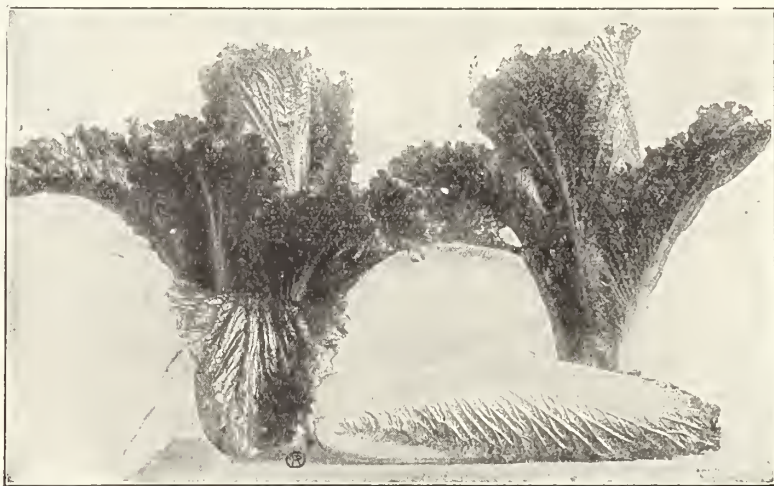
American Savoy Large, flattish heads, very curly and hard. One of the best Savoyes. Oz. 20c; $\frac{1}{4}$ lb., 75c; 1 lb., \$2.50, postpaid.

Mammoth Rock Red Heads solid, of good size and quality. Oz., 25c; $\frac{1}{4}$ lb., 90c; 1 lb., \$3.00, postpaid.

Red Stone Head A new Danish introduction and exceptionally good, forming big uniformly round heads, smooth, hard, of a glowing dark red color. A good keeper that will last long into the Winter, when fully matured. Oz., 25c; $\frac{1}{4}$ lb., 90c; 1 lb., \$3.00, postpaid.



Premium Late Flat Dutch.



Chihili Chinese Cabbage.

Celery Cabbage

CULTURAL DIRECTIONS. One ounce will produce 2,000 plants. Do not sow seed till the last of May, as earlier sowing generally results in most of the plants going to seed instead of making heads. Seed may be sown in seed beds and transplanted in rows three feet apart and about fifteen inches apart in the row, or may be sown in rows and thinned.

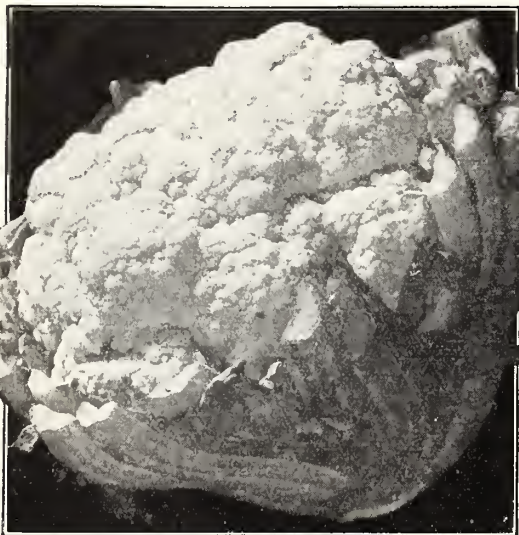
For late crop may be sown as late as August tenth. Late crop is generally trenched with boards. Make trench about six feet wide, pull the head, cutting off roots and placed side by side and trench. Bank outside the boards with dirt and protect the tops with straw, putting boards over tops. Remove as wanted during early winter months.

Chihili This new vegetable is becoming more popular every year and is a money-maker for the market gardener. It has a delicate cabbage flavor, much milder than cabbage. The heads are long, about 16 inches, rather slim, coming to a point at the top. Color a very dark bluish green, with the inner leaves and stalks blanched to a beautiful snow white. Oz., 40c; $\frac{1}{4}$ lb., \$1.25; 1 lb., \$4.50, postpaid.

Swiss Chard

CULTURAL DIRECTIONS. One ounce to fifty feet of drill; five pounds per acre. Sow early in the spring, in rows eighteen inches apart and thin to one foot apart. The plants are of very rank growth, and will continue to grow and produce all Summer and if given a little protection during the Winter, will produce early greens in the Spring.

Lucullus Leaves large and curly. Plant grows about two feet high, mid-ribs are very broad and are a good substitute for asparagus during the Summer months. Oz., 10c; $\frac{1}{4}$ lb., 25c; 1 lb., 75c, postpaid.



Danish Perfection Cauliflower.

Cauliflower

CULTURAL DIRECTIONS. One ounce of seed will produce 2000 plants. Four ounces of seed to an acre. Directions about the same as Cabbage, except planting in rows about 3 feet apart and 18 inches apart in the row. When plants begin to head, tie leaves up around the heads to protect from the sun.

Select Snowball A very fine strain of this variety grown from selected heads. Oz., \$2.00; ¼ lb., \$6.00; 1 lb., \$20.00, postpaid.

Danish Perfection The self-protecting cauliflower, so called on account of the spiral-shaped manner in which the leaves grow around the stem, thereby protecting the head with little, if any, tying. A cross between Early Erfurt and Danish Dry Weather. Heads snow-white, very compact and solid. Oz., \$2.00; ¼ lb., \$6.00; 1 lb., \$20.00, postpaid.

Danish Dry Weather This is an excellent large, pure white variety that matures later than the Select Snowball, but is better suited for dry localities. Oz., \$2.50; ¼ lb., \$8.00; 1 lb., \$30.00, postpaid.

Extra Early Dwarf Erfurt An excellent sort, producing good sized creamy white heads. One of the best for general cultivation. Oz., \$2.00; ¼ lb., \$6.00; 1 lb., \$20.00, postpaid.

Carrots

CULTURAL DIRECTIONS. One ounce to 100 feet of drill; two pounds per acre. For early crop, sow in April or May, and June to July for late. Sow seed half an inch deep in rows 12 inches apart and thin to three inches apart in the row. Plant in rich, sandy loam.

Feonia Coreless The most handsome and appetizing appearing Carrot we are acquainted with and of the highest quality. The roots average 6 inches in length by 1½ inches in diameter, nearly cylindrical, exceptionally smooth and of a distinct deep orange. Flesh is crisp, sweet and practically coreless; tops are very small. Oz., 15c; ¼ lb., 50c; 1 lb., \$1.50, postpaid.

Red-Cored Chantenay A superior Carrot for early bunching or shipping. Roots are very uniform and smooth. The exterior color is a rich orange and the cores are small and nearly the same color. A little earlier than Chantenay and considered the best variety for the market gardener and shipper. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

★ **Chantenay** A medium early, half-long variety for the early market. Roots 5 or 6 inches long, smooth and tapering; orange-red in color. Used largely for bunching. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

★ **Danvers Half Long** The best main crop sort. Roots smooth and handsome. Very productive. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

French Short Horn Very early bunching Carrot; best for forcing. Roots orange-red in color, about three inches long, tender and sweet. Oz., 10c; ¼ lb., 35c; 1 lb., \$1.25, postpaid.

Long Orange Good variety for deep, sandy soil. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.



Feonia Coreless Carrots.



Gator Hide Mulch Paper increases quality as well as yields. Compare the larger, better shaped, mulched Carrots on the right with the unmulched on the left.

Oxheart or Guerande Very short, thick and stubby. Very desirable for heavy clay soil, as it is easily harvested. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

White Belgian Large, white stock Carrot. Oz., 10c; ¼ lb., 20c; 1 lb., 80c, postpaid.

Yellow Belgian Grows one-third out of the ground. Very large, long yellow stock Carrot. Oz., 10c; ¼ lb., 20c; 1 lb., 80c, postpaid.

Scarlet Horn A small, early, stump-rooted variety of good flavor and quite coreless. The roots will average about 3 inches long. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Nantes A very superior Carrot. It is coreless, brittle, fine grained and of fine, mild, sweet flavor. The color is reddish orange and the skin is smooth. It is 6 inches long, cylindrical and very stump-rooted. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

★ This variety recommended by the Michigan State College.

Celery

CULTURAL DIRECTIONS. One ounce will produce from 5,000 to 10,000 plants. Two ounces per acre. Muck soil is best for Celery, but good Celery may be grown on rich, loamy soil if water can be applied freely. Celery needs manure and fertilizer.

For early crop sow seed in hotbeds or greenhouse in March. Make seed bed very fine, sow seed broadcast and pack soil. Transplant in June in rows three or four feet apart. Early Celery is bleached with boards or paper. For late crop sow seed in April or May in open seed beds and transplant in July. Bank with muck or dirt and trench in the field in October.

The New Golden Self Blanching This new type is grown in FRANCE. It has a long stalk and is commonly called "TALL STRAIN." A vigorous and rapid grower, and not so badly affected by blight or disease. It can be grown on muck, which will not grow the old Golden Self Blanching, either on account of exhausted condition of the soil or the soil being too badly infected with disease spores. It makes a magnificent growth of tall, broad, flat stalks of a lighter shade of yellow. If seed is sown later in the open ground and transplanted in July or August, so that plant is not over ripe when trenched, it will come out crisp and hard up to the first of January. This strain is the leading variety grown today. Oz., \$1.25; ¼ lb., \$4.50; 1 lb., \$16.00, postpaid.

New Golden Self Blanching Imperial strain. This strain is American grown and for the past two years has been grown in our trials with entire satisfaction. It is very similar to the "Tall Strain French Grown" (listed above) from which it was taken and is a valuable addition and should become a favorite with the celery grower. Oz., \$1.00; ¼ lb., \$3.50; 1 lb., \$12.00, postpaid.

Easy Blanching Our strain of this valuable variety is superior to most strains from the fact that it bleaches evenly, leaving no green, unbleached stalks. Does not become soft after bleaching, but remains firm, brittle and sweet. The stalks are very thick and quite tall. It is about two weeks later than the Golden Self Blanching, and may be used either for early or late celery. When grown for late Celery, the seed should be sown later and transplanted from the middle to the last of July, and when trenched with dirt will keep till January and come out of the trenches firm and brittle. It has no superior as to eating quality or flavor. It is almost immune to blight and no crop has ever been lost from disease. Oz., 75c; ¼ lb., \$2.50; 1 lb., \$10.00, postpaid.

★ **Curly Leaf Easy Blanching** (M. S. C. Strain). This is a new selection from Easy Blanching Celery possessing all of the qualities of that well known strain, and in addition presenting an exceptionally handsome appearance due to its curled and ruffled leaves. This seed is a pedigreed strain produced in California by the U. S. Department of Agriculture from seed furnished by the Department of Botany, Michigan State College. This seed is especially recommended for use on diseased soil where Golden Self Blanching Celery does poorly and where a green Celery is suitable to market demands. This strain blanches readily in cold storage and excels any other green variety in this respect. It can readily be recognized even in the seedling stage and when this seed comes into general use, substitutions of other varieties can readily be detected. ½ oz., \$1.00; 1 oz., \$1.50; ¼ lb., \$5.50; 1 lb., \$20.00, postpaid.

Paris Select, Grower's Golden A distinct new variety, embracing the quick growing and keeping qualities of the French New Golden Self Blanching. It grows a big stalk, but shorter, which is much preferred. It is very uniform in height, superior quality, blanching quickly to a creamy yellow color. Where the trenching is done with earth, it has no equal, but for early celery, where the trenching is done with boards or paper, it is not recommended. Oz., \$1.25; ¼ lb., \$4.50; 1 lb., \$16.00, postpaid.

French Success A late maturing green celery, but the best of all for keeping qualities. Oz., 35c; ¼ lb., \$1.00; 1 lb., \$3.50, postpaid.



Wonderful Celery.

Grower's Wonderful Celery A distinct and valuable early variety. The plants are semi-dwarf, very vigorous, and are not so susceptible to blight and other Celery diseases. It has a very full heart which bleaches quickly to a beautiful golden yellow color. Its quality is surpassed by none, and its handsome appearance commands a ready sale in any market. An excellent sort for both home or market garden. It is all the name implies. Oz., \$1.50; ¼ lb., \$5.50; 1 lb., \$20.00, postpaid.

Golden Plume The grandest new variety introduced in many years. It seems to be an intermediate between the Golden Self Blanching and Easy Blanching. While it is a yellow celery, it is a lighter shade of yellow than the Golden Self Blanching. Plant is a more vigorous grower, nearly as early, stalks are thicker, and not quite so flat as our New Golden Self Blanching which it resembles. Blanches easily and does not become soft after bleaching. Seed is very pure, no green stalks or off types appearing and no hollow stalks. Plants very large and will turn out more boxes to the acre than any variety grown. Oz., \$1.50; ¼ lb., \$5.50; 1 lb., \$20.00, postpaid.

Newark Market A superior strain of green celery. The stalks are large, thick and fleshy, very brittle, crisp and of a fine flavor. Blanches easily. Oz., \$1.35; ¼ lb., \$5.00; 1 lb., \$18.00, postpaid.

Pride of the Market A dwarf thick-stalked variety, vigorous grower, not easily blighted, and yields about as many boxes per acre as the White Solid, but not so good a keeper, and should be marketed after the Golden Self Blanching and before the White Solid. Our seed is grown by the originator. Oz., \$1.50; ¼ lb., \$5.50; 1 lb., \$20.00, postpaid.

Winter Queen Of very stocky dwarf growth and one of the best for its winter keeping qualities. Our strain has a large heart and presents a handsome appearance when bunched. Oz., 25c; ¼ lb., 75c; 1 lb., \$2.50, postpaid.

Fordhook Emperor Quite dwarf and stocky with large, full light yellow heart. Stalks broad, thick and crisp. Very tender and brittle. Oz., 40c; ¼ lb., \$1.25; 1 lb., \$4.50, postpaid.

Golden Self-Blanching Old style, American grown seed. Oz., 75c; ¼ lb., \$2.50; 1 lb., \$8.00, postpaid.

White Plume, Improved A very early, handsome variety, leaves light, bright green; easily blanched a beautiful silvery-white color. A popular sort for first early market. Oz., 30c; ¼ lb., \$1.00; 1 lb., \$3.50, postpaid.

Columbia Very brittle and crisp, sweet and nutty. So tender it is hard to pack for shipping. Oz., 25c; ¼ lb., 75c; 1 lb., \$2.50, postpaid.

Soup or Cutting The leaves are used for flavoring soups, etc. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

Celeriac or Turnip-Rooted Celery Oz., 25c; ¼ lb., 75c; 1 lb., \$2.00, postpaid.

★Michigan State College Disease-Resistant Strains of Celery

★Michigan State College Strain Golden Self Blanching Celery YELLOWS RESISTANT

Recommended for Soil Infested with Yellows



M. S. C. Strain Golden Self-Blanching Celery grown in soil infested with "Yellows" at South Denver, Colorado, contrasted with a commercial strain grown in the same field. One crop was stunted by "Yellows" and was largely unmarketable, the other produced stalks of uniformly high quality.

Cress or Pepper Grass

CULTURAL DIRECTIONS. Sow early in the Spring in rich, well prepared soil, in rows about fifteen inches apart. Thin to four inches apart in the row.

Extra Curled (Pepper Grass). A small, curled plant having a fine pungent flavor and used as a salad. Should be sown thickly and frequently, covering very lightly as it soon runs to seed. May be cut several times. Oz., 10c; ¼ lb., 25c; 1 lb., 75c, postpaid.

True Water For growing along banks of ponds and streams as well as in shady places where there is a supply of fresh water. It increases both by the spreading of the roots and seeding. Leaves are quite large and thick. Oz., 50c, postpaid.

This strain of Golden Self-Blanching Celery has been produced at the Michigan State College as a result of several years investigation and test by the pathologists of the Department of Botany. The M. S. C. Strain is of the type of the old-fashioned yellow celery so extensively produced a few years ago and now almost superseded by the green varieties that are resistant to Yellows. This new selection is practically a pure line of Golden Self-Blanching with resistance to soil sickness or Yellows as an added quality.

This variety bleaches in ten days to two weeks, ships well, keeps well in storage and the beautiful golden-yellow color in the leaves and the creamy white color of the stalks is unsurpassed by any other variety. It is not a quick blanching celery with soft stalks like some of the newer yellow sorts. The M. S. C. strain is resistant only to the Yellows disease and must be sprayed to protect it against the blights that affect the foliage and stalks.

The seed offered for sale has been produced in co-operation with the U. S. Department of Agriculture in California. Seed for increase is furnished by the Department of Botany from their own selections and sent to California for increase by government experts.

The following new prices are announced for 1931: ½ oz., \$1.00; 1 oz., \$1.50; ¼ lb., \$5.50; 1 lb., \$20.00, postpaid.

Corn Salad

CULTURAL DIRECTIONS. One ounce for 100 feet of drill. Sow in August or September for Fall or Spring use. Drill about one inch deep in rows twelve inches apart. Thin and keep free from weeds. Protect in Winter by light covering of straw. Use as a salad.

Large Seeded Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Collards

True Georgia Plant two to three feet high, forming a cluster of tender, undulated leaves at the top of its rather long stem; used as greens. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Chives

An onion-like plant used for flavoring soups or as a salad. The plants grow about 10 inches high and make an excellent ornamental edging for the garden bed which may be cut frequently as a new growth will soon appear after each cutting. ½ oz., 30c; 1 oz., 50c, postpaid.

★This variety recommended by the Michigan State College.

Sweet Corn

CULTURAL DIRECTIONS. One pint for 100 hills; about six quarts per acre. Early corn is planted in rows $2\frac{1}{2}$ to 3 feet apart, and about 8 inches apart in the row, in May, and will be ready for table eight or nine weeks from date of planting. Later varieties should be planted from the 15th of May to the 15th of June. Plant in hills 3 to 4 feet apart. It will be ready for use in from 10 to 12 weeks from date of planting.

Golden Gem or **Golden Nugget.** (NEW). A valuable new and early variety. The ear is the same size as Golden Bantam and of equally good quality. An 8-rowed Corn and earliest of all yellow sorts. It grows a little over $4\frac{1}{2}$ feet in height and is nearly two weeks earlier than Sunshine. With the extreme earliness and good quality this will be a favorite with market growers. As our stock is quite limited, early orders will be given the preference. Lb., 40c, postpaid. Not prepaid, 10 lbs., \$3.50.

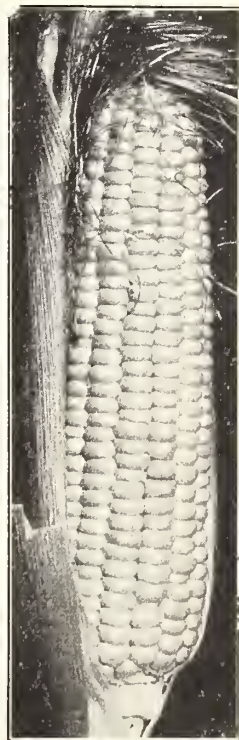
★ **"Sunshine"** A valuable new yellow variety for the market grower or the private gardener. It was originated by Professor Yeager of the North Dakota Experiment Station, from a cross between the Golden Bantam and Gill's Early Market, and combines the earliness and large size of ear of the Gill's Early Market with much of the high quality of the Golden Bantam. It is ready for market a week to ten days earlier than Golden Bantam, and has a much larger ear, the ears averaging $8\frac{1}{2}$ inches long, with 12 to 14 rows. Everyone who has tested this Corn has much praise for its quality and extreme earliness. Especially valuable to the market grower. Lb., 35c, postpaid. Not prepaid, 10 lbs., \$2.50; 25 lbs., \$6.00; 50 lbs., \$11.00.

★ **Early Surprise** This Corn is really a Surprise. Matures in 70 days. It is a white eared and white cobbled Corn of very good quality. Ears 7 to $7\frac{1}{2}$ inches long, growing on stalks about five feet tall. Planted at the same time, it is a week to 10 days earlier than Early White Cory. If you want to have the first Sweet Corn on the market, be sure to plant Early Surprise. Lb., 25c, postpaid. Not prepaid, 10 lbs., \$2.25; 25 lbs., \$5.25; 50 lbs., \$10.00.

Bantam Evergreen This new variety combines all the good qualities of Golden Bantam and Stowell's Evergreen. Has the bright golden color and tender kernels of Golden Bantam and the flavor and sweetness of Stowell's Evergreen. Ears much larger than Bantam; not quite as large as Evergreen, but much earlier. Stalks are full leaved and usually bear two well developed ears. Lb., 25c, postpaid. Not prepaid, 10 lbs., \$2.25; 25 lbs., \$5.25; 50 lbs., \$10.00.

Early White Cob Cory One of the very earliest and best of all extra early Sweet Corn. Ears 7 to 8 inches long, fairly sweet, tender and white. Lb., 25c, postpaid. Not prepaid, 10 lbs., \$2.00; 25 lbs., \$4.75; 50 lbs., \$9.00.

Stowell's Evergreen The most popular late Sweet Corn. More extensively planted than any other sort, being the general favorite with the market gardeners. Ears are of good size, grain deep, tender and sugary. Lb., 35c, postpaid. Not prepaid, 10 lbs., \$2.40; 25 lbs., \$5.75; 50 lbs., \$11.00.



★ Sunshine.



Gator-Hide Mulch Paper hastens seed germination and promotes growth. Note the better stand and increased size of the mulched Corn as compared with the unmulched. Both planted at the same time.

Black Mexican Very early. Kernels turn bluish black when ripe. Lb., 25c, postpaid. Not prepaid, 10 lbs., \$2.00; 25 lbs., \$4.75; 50 lbs., \$9.00.

Early Evergreen Has all the merits of the "Stowell's" and matures about 10 days earlier. It is a splendid variety for the market gardener. Lb., 25c, postpaid. Not prepaid, 10 lbs., \$2.00; 25 lbs., \$4.75; 50 lbs., \$9.00.

★ **Golden Bantam** Hardy, early maturing, very dwarf. Cob is small but fills out nicely with large, deep cream colored kernels, which turn yellow when ripe. No home garden should be without this excellent Corn. Lb., 25c, postpaid. Not prepaid, 10 lbs., \$2.25; 25 lbs., \$5.25; 50 lbs., \$10.00.

Country Gentleman An especially fine quality Corn; without row formation. Lb., 35c, postpaid. Not prepaid, 10 lbs., \$3.00; 25 lbs., \$7.25; 50 lbs., \$14.00.

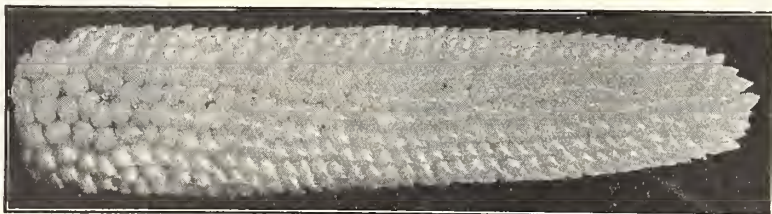
Early Minnesota Lb., 25c, postpaid. Not prepaid, 10 lbs., \$2.00; 25 lbs., \$4.75; 50 lbs., \$9.00.

POP CORN

Selected White Rice A very handsome and prolific white Pop Corn. Ears are 5 to 7 inches long. The kernels are long, pointed and somewhat resemble rice. Productive, excellent quality, crisp and delicious. 1 lb., 25c, postpaid; 5 lbs., \$1.00, not postpaid.

Japanese Hullless A dwarf growing variety, heavy yielder of attractive ears, peculiar form, being nearly as thick as long. The kernels are larger than White Rice, color pearly white. Entirely hullless, which makes them the tenderest of any Pop Corn, when popped. 1 lb., 25c, postpaid; 5 lbs., \$1.00, not postpaid.

Black Beauty Ripens earlier than any other sort; heavy yielder. Ears medium size, kernels rounded and smooth. Pops large; is decidedly tender and crisp. The kernels are black but show up white when popped. 1 lb., 25c, postpaid; 5 lbs., \$1.00, not postpaid.



Selected White Rice Pop Corn.

Table and Pickling Cucumbers

CULTURAL DIRECTIONS. One ounce of seed to fifty hills. One to two pounds per acre. Cucumbers should not be planted until the ground is warm, about June first. For pickles, they may be planted as late as July first. They require a warm, rich, sandy soil. Plant in hills about four feet apart and about eight seeds to the hill. When all danger from insects is past, thin to three or four of the strongest plants.

Grand Rapids Forcing, Improved Strain By years of constant, careful plant selection, we can now offer the "Improved Strain." This is a White Spine selection and is an excellent long, slender, dark green variety. The vines are exceptionally healthy and productive. The fruits will average 12 to 14 inches in length by 2½ inches in diameter, and are very symmetrical. The color is all that could be desired. It is an ideal forcing cucumber and will breed true to type. Oz., \$1.50; ¼ lb., \$5.00; 1 lb., \$15.00, postpaid.

Chicago Pickling, or Westerfield's The fruit is of medium size, pointed at both ends, and makes a firm pickle. Oz., 15c; ¼ lb., 35c; lb., \$1.10, postpaid.

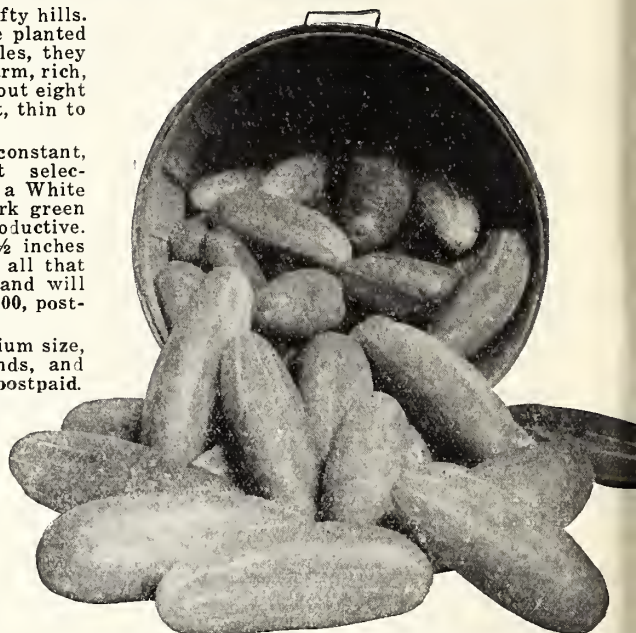
Longfellow Cucumber An excellent long, slender, dark green variety, equally desirable for greenhouse forcing or outdoor culture. An ideal type for the private garden or as a straight pack variety for shipment to market. 12 to 14 inches long by 2½ inches in diameter. Fairly early, a good healthy grower, very productive. Oz., 25c; ¼ lb., 75c; 1 lb., \$2.50, postpaid.

White Spine (Improved). A very fine, early strain. Fruit very rich, dark green, symmetrical, thick and nearly square ended, vigorous and productive. Oz., 15c; ¼ lb., 35c; lb., \$1.25, postpaid.

Arlington White Spine One of the earliest and very productive. Fruit uniform, of bright green color. Used for early slicing. Oz., 15c; ¼ lb., 35c; lb., \$1.25, postpaid.



Chicago Pickling Cucumber.



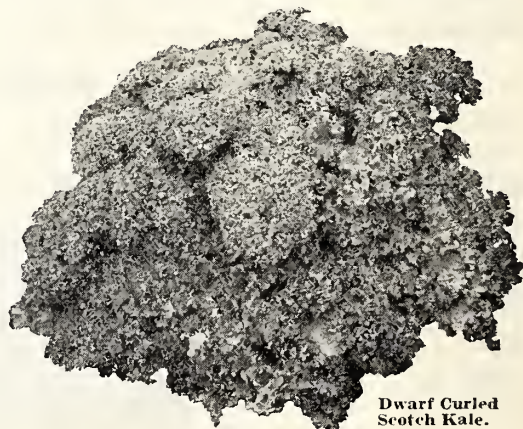
Grand Rapids Forcing Cucumber.

Early Fortune One of the most productive sorts now grown. Fruit symmetrical, about nine inches in length, round and beautiful dark green in color, which does not fade. Flesh very brittle and crisp, with small seed cavity. Oz., 15c; ¼ lb., 40c; lb., \$1.25, postpaid.

Improved Long Green A standard late, well known table sort. 12 to 14 inches long, slender, more or less warted, tapering towards the stem end, color dark green, flesh white and firm. Oz., 15c; ¼ lb., 45c; 1 lb., \$1.50, postpaid.

Nichols' Medium Green Color dark green, flesh crisp and tender, medium size, straight and smooth. Very productive. Oz., 15c; ¼ lb., 35c; lb., \$1.25, postpaid.

Davis' Perfect One of the products of our Eugene Davis, produced by crossing the White Spine variety with a long English forcing Cucumber. The Davis' Perfect is one of the most prolific sorts. The fruit is long, slim, and holds color till nearly ripe. Oz., 15c; ¼ lb., 45c; 1 lb., \$1.35, postpaid.



Dwarf Curled Scotch Kale.

Kale or Borecole

CULTURAL DIRECTIONS. One ounce to 150 feet of drill. Sow from August 15th to October in rows, eighteen inches apart, and they will yield greens during Fall and Winter. They are improved by freezing.

Dwarf Curled Scotch A handsome, very finely curled, dwarf spreading variety, foliage long and an attractive bright green, very hardy. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Tall Curled Scotch Plants of this variety grow 2 to 3 feet in height, bearing long plume-like light green leaves which are much cut and deeply curled at the edges. Very hardy. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Eggplant

CULTURAL DIRECTIONS. One ounce to 1000 plants. Seed germinates very slowly and requires warm ground. Start in hotbeds in March. Transplant about June 1st in rows about three feet apart and two feet apart in the row.

Black Beauty Early and productive. Fruit large and of a rich glossy black color. Postpaid, oz., 40c; $\frac{1}{4}$ lb., \$1.40; 1 lb., \$5.00.

New York Purple A favorite market variety. Fruits larger than the Black Beauty. The plant is large, spreading and spineless, producing 4 to 6 large, oval fruits of dark purple color. Oz., 40c; $\frac{1}{4}$ lb., \$1.40; 1 lb., \$5.00, postpaid.



The growth and yield of the mulched Eggplants on the left were greatly increased as compared with the unmulched on the right.

Endive

CULTURAL DIRECTIONS. One ounce to 150 feet of drill. Sow in rows about 15 inches apart and thin to one foot apart in the row. Sow seed for Fall crop in June or July. When nearly full grown, tie outer leaves together bringing them up over the head for blanching.



Large Green Curled Endive.

Long Green Curled The most hardy and vigorous sort, has very curly leaves, the mid-rib being white. After blanching, the leaves make a delicious and appetizing salad. Oz., 10c; $\frac{1}{4}$ lb., 30c; 1 lb., \$1.00, postpaid.

Moss Curled Grows more compact than the green curled and the medium green leaves are finer cut, blanches creamy white. Oz., 10c; $\frac{1}{4}$ lb., 30c; 1 lb., \$1.00, postpaid.

Broad-Leaved Batavian (Escarolle). One of the best varieties for salads; leaves of upright growth, broad, more or less twisted and waved, bright deep green, with a nearly white midrib. Inner leaves form a fair head which blanches a creamy white. Oz., 10c; $\frac{1}{4}$ lb., 30c; 1 lb., \$1.00, postpaid.

Leek

CULTURAL DIRECTIONS. One ounce to 100 feet of drill. Two or three pounds per acre. Sow in May in rows fifteen to eighteen inches apart and thin to six or eight inches apart; generally sown in trenches and covered with half an inch of soil, or they may be sown in seed beds and transplanted. When grown for the market they are left in the field all Winter and pulled early in the Spring.

American Flag

Stem about ten inches long by two inches thick. A strong vigorous plant with mild flavor. One of the best sorts for the market garden. Postpaid, oz., 20c; $\frac{1}{4}$ lb., 60c; 1 lb., \$2.00.



White Vienna Kohl-rabi.

Kohl-rabi—

Turnip-Rooted Cabbage

CULTURAL DIRECTIONS. One ounce to 200 feet of drill. Seed should be sown in light, rich soil, very early in the Spring for early crop, in rows eighteen inches apart and thin to six inches apart in the row. Plantings should be made the latter part of July for Fall use. Should be used when young and tender.

Early White Vienna Very early, small tops, can be planted close together; best for forcing, or field culture. Postpaid, oz., 20c; $\frac{1}{4}$ lb., 60c; 1 lb., \$2.00.



American Flag Leek.

Leaf Lettuce

CULTURAL DIRECTIONS. One ounce to 150 feet of drill. Lettuce requires rich soil to grow best quality. Mix **Pulverized Hen Manure** well with the soil and sow seed very early in the Spring. For leaf lettuce, sow in rows twelve inches apart and do not thin until plants are big enough to use. Head lettuce should be sown in rows twelve inches apart and thinned to eight inches apart in the row.

★Grand Rapids Forcing, Washington Strain

This splendid strain was first produced by plant selection by the honored W. W. Tracy of the Agricultural Department at Washington. Mr. Yonker procured some from Eugene Davis, sent him by Mr. Tracy. Mr. Yonker, by careful plant selection, has kept it up to its original purity. It is absolutely true to type and is more like the original Grand Rapids Forcing as it came from the hands of Eugene Davis. Mr. Yonker is well qualified to continue the breeding of this variety and can be depended upon to keep it up to its present high standard. There are very few if any sports. Color a light green; heads very heavy; leaf crisp, tender and curly; quality of the best. We grow our stock seed in the greenhouse and send to one of the best Lettuce seed growers on the Coast to grow the seed crop. Oz., 25c; ¼ lb., 75c; 1 lb., \$2.50, postpaid.

Grand Rapids Forcing, Ohio Strain An exceptionally good strain of the old type of forcing variety and is especially adapted to mid-winter crop in the greenhouse. The leaf is dark green, of rapid upright growth, and curly. The quality is very desirable and will retain its freshness a long time after being cut. A great favorite in the Ashtabula and Cleveland lettuce markets. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Early Curled Simpson An early loose leaf variety. One of the best sorts for the home garden. Oz., 15c; ¼ lb., 35c; 1 lb., \$1.25, postpaid.

★Black-Seeded Simpson One of the best loose leaf varieties for the home garden or for the market garden, for outdoor sowing. Can be grown all through the season. Very tender. Oz., 15c; ¼ lb., 35c; 1 lb., \$1.25, postpaid.

Prizehead A crisp and tender loose-leaved non-heading sort, color light brown on a medium green base, quality good. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

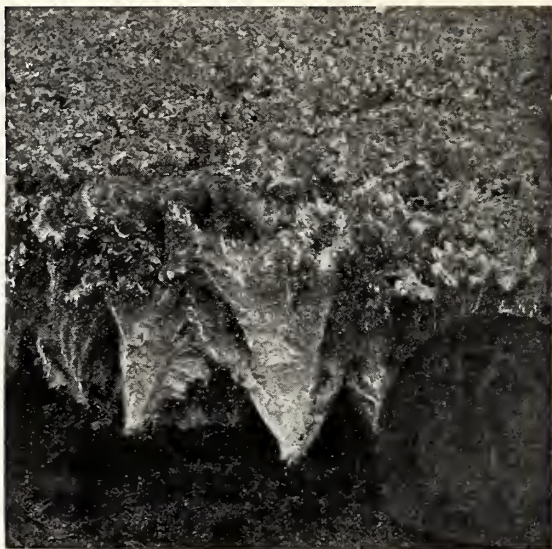
Head Lettuce

★Big Boston Our Big Boston Lettuce seed is grown for us by one of the most careful firms of seed growers in the world. It heads best in cool weather of early Spring and late Fall. We do not recommend it for the hot Summer months. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

White Boston Has a fine, large, solid head and light green outer leaves, but does not have the brown edges. A tightly folded heart that blanches to a bright, creamy yellow shade. It is sweet and crisp. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

Unrivald or Green Leaved Big Boston French grown. Unrivald heads better in hot weather than Big Boston, which it resembles, but does not have the red tinge. The heads are firm and of high quality. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

★Salamander A large, firm head, leaves light green, broad, thick, somewhat crumpled, closely overlapping so that they blanch to a creamy white. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.



Washington Strain of Grand Rapids Forcing Lettuce.

All Seasons Heads very large, grayish green, leaves rather thick but blanch to a beautiful golden yellow. This variety wants hot weather to head well and is not satisfactory for early Spring crop. Oz., 15c; ¼ lb., 35c; 1 lb., \$1.35, postpaid.

New York or Wonderful A large, late globular heading variety, leaves broad, of thick texture, fairly blistered and crumpled, and the borders frilled; color dark green, quality good. Known in California and the West as "Los Angeles" and shipped to eastern markets under the misleading name of "Iceberg". Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

May King A handsome, small, extremely early, compact leading variety, leaves light yellowish green, tinged reddish brown at the edges, while the heart blanches a rich golden yellow, fine quality. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Iceberg A large, crisp lettuce, very tender, stands hot weather better than most varieties, but has not been grown successfully on our muck. Oz., 20c; ¼ lb., 50c; 1 lb., \$1.75, postpaid.

★Hanson Forms large flat head, outer leaves are bright green, inner leaves white, quality good. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Brown Dutch Forms a good firm head, yellowish but very inside and of good quality. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Brown Curled A curled or crisp heading variety, medium, dark brown, leaves quite curly. The texture is rather coarse but the quality is good. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

California Cream Butter or Royal Summer Cabbage

A popular variety for Autumn and Winter use. Forms a large head, which is very buttery, and of a rich golden yellow inside. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Romaine or Early White Self-Folding Lettuce We consider this the very best strain of the Cos variety. Very uniform in type, and forms a compact, firm head. Color dark green outside and beautifully blanch inside. Very crisp; sweet. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

★ This variety recommended by the Michigan State College.

Muskmelons

CULTURAL DIRECTIONS. One ounce will plant 50 hills, one pound an acre. Melons do best in a rich, sandy soil. Hills should be from four to six feet apart. Plant ten to twelve seeds to the hill. Cover seeds with an inch of soil. When danger from frost and insects is past, thin to four good plants to the hill.

★**Honey Rock** (New). The fruit is round, slightly flattened at the ends, of medium size, about midway between Bender and Hearts of Gold. The flesh is soft pink, with a greenish tint and of excellent quality. It is earlier than the Hearts of Gold, grades out well and is an excellent shipper. Oz., 40c; ¼ lb., \$1.00; 1 lb., \$3.00, postpaid.

★**Hearts of Gold** Grown from Morrill Pedigreed seed by one of the best growers of melon seed in the trade. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Lake Champlain Very early, fifty-seven days from seed to market. A medium-sized melon, nicely netted, flesh deep, sweet and melting, of golden yellow color. Immensely productive. The market gardener has long been looking for the Lake Champlain. It is a money maker. Oz., 20c; ¼ lb., 50c; 1 lb., \$1.50, postpaid.

Extra Early Osage A very fine melon of the Osage type. Seed cavity very small. Flesh deep, rich yellow color, very sweet and delicious. At least one week earlier than the Osage melon, smaller, vine prolific. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

★**Extra Early Knight** The earliest high quality melon and especially adapted for growing in the far North. A medium-sized variety with oblong fruit distinctly ribbed and well covered with a close gray netting; skin deep green, turning to golden at maturity; flesh fairly thick exceedingly sweet and of a bright green color. Worthy of a place in every garden. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.



A test of the Dominion Experimental Farm. The row on the left (unmulched) gave 26 melons weighing 31½ lbs. The row on the right mulched with Gator Hide Mulch Paper gave 121 melons weighing 142 lbs.

Early Hackensack An early selection, maturing from a week to ten days earlier than the old Hackensack, fruit somewhat smaller, irregularly ribbed, coarsely and heavily netted; flesh green, thick and of a fine quality. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Hoodoo Vine vigorous, quite blight-resistant and very prolific. Flesh orange in color. Fruit medium size; quality, sweet and delicious. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Emerald Gem Unquestionably one of the best and earliest melons for home garden and local markets and in our opinion the best for quality; of medium size, a flattened globe in form, irregularly and distinctly ribbed and lightly netted; color deep emerald green; flesh very thick, sweet and of rich salmon color; seed cavity exceedingly small. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Honey Dew Fruit large, surface smooth and hard without ribbing or netting, flesh light emerald green, thick, very tender and melting with an extreme sweetness found in no other melon. Is an excellent shipping and keeping sort. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Edwards' Perfecto Fruit very uniform in size, nearly round and densely covered with a hard, gray netting. Flesh very thick and of a beautiful salmon color, shading to green as it nears the rind. Perfecto has the deepest flesh and smallest seed cavity of any type of the Rocky Ford. Good shipping melon, extremely productive and most delicious eating. The coming market melon. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Osage A rather large, oval melon of very superior quality, fruit dark green, slightly ribbed and well covered with a shallow, gray netting; flesh rich orange-salmon, exceedingly thick, with a small seed cavity. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Rocky Ford The fruit is small, almost round, smooth, showing no ribs, and densely covered with a heavy hard gray netting; flesh thick and deep green, showing a faint lining of pink or gold at the center; of the highest quality. An excellent shipper. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

★**Bender Surprise** A new yellow-fleshed melon, becoming very popular in the East. A splendid keeper and shipper. Melon is large netted, flesh very deep, sweet, and delicious. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Milwaukee Market The skin is light green, fruits nearly round with slight sutures; flesh salmon, wonderfully sweet, with almost no stringiness. Our strain has been improved by careful selection and for a fine home melon and a market variety it has no superior. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.



Extra Early Osage.

★ This variety recommended by the Michigan State College.

Selected Varieties of Watermelon



Halbert Honey.

Citron, Red Seeded The old well known red seeded preserving melon. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Tom Watson Produces melons 18 to 24 inches long by 10 to 12 inches in diameter, weighing 40 to 50 pounds, on rich soil. Flesh deep red and very crisp; melting and of exquisite flavor. Good shipper. Oz., 10c; ¼ lb., 30c; 1 lb., 90c, postpaid.

CULTURAL DIRECTIONS. One ounce to 30 hills, about three pounds per acre. Watermelons want rich, sandy soil. Cultural directions the same as for Muskmelons, except the hills should be eight feet apart.

Cole's Early One of the earliest Melons; small, seldom more than twelve inches long. Flesh red and sweet; rind thin and brittle. Not a good shipper, but good for home garden and early market. Oz., 10c; ¼ lb., 30c; 1 lb., 90c, postpaid.

Halbert Honey Very similar to Kleckley's Sweet, but is blunt at both ends. For home market and garden it has no rival, but it is not a good shipper. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

★ **Kleckley's Sweet or Monte Cristo** One of the sweetest Melons on the market; medium early, long, averaging 18 to 20 inches, slightly tapering to the stem end. Rind very dark green, flesh very bright rich red and ripens nearly to the rind. Too tender for a shipping Melon, but excellent for market and home garden. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Sweetheart A medium early variety growing to a large size; a heavy, round to oblong form with rather thick, tough rind and a good shipper. Color very light green, flesh bright red and seeds black. Oz., 10c; ¼ lb., 30c; 1 lb., 90c, postpaid.

Peerless or Ice Cream An old standby. Medium early; fruit oblong, large size; rind light green, mottled and veined; flesh scarlet, solid to center, sweet, melting and delicious. Not a good shipper. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Irish Grey Wonderful in yield. Will produce more good melons than any other variety. The sparkling red flesh is very sweet and delicious and has no hard, unripe centers and is never stringy. The flesh is firm and will not break when sliced. The size is always large. Shape long. Earlier than Tom Watson. Will keep in good condition long after being picked. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Mustard

The leaves are used as a salad or may be boiled like spinach. Sow seed in any good garden soil early in the Spring in rows 1½ to 2 feet apart and when well up thin out the plants so they stand 8 or 10 inches apart. By making several sowings a week the tender leaves may be had throughout the season. One ounce will sow 50 feet of row.

Southern Giant Curled Plant vigorous and hardy, upright spreading growth, leaves large, green tinged yellow, much crumpled and frilled at the edges. Oz., 10c; ¼ lb., 25c; 1 lb., 65c, postpaid.

Fordhook Fancy A vigorous growing mild variety, leaves dark green, beautifully curled and fringed. Fine for salads and garnishing. Oz., 10c; ¼ lb., 25c; 1 lb., 65c, postpaid.

Okra or Gumbo

Very wholesome. The pods when young, make fine soup, and are also used in mixed vegetable soups. Plant, after the ground is warm and dry, in drills 3 feet apart, thinning the young plants to 1 foot apart. Make early and late sowings to secure a supply throughout the season. Easy to grow in any good garden soil.

White Velvet Plants 3½ feet high, pods white, long, smooth, and tender; early and productive. Oz., 10c; ¼ lb., 25c; 1 lb., 65c, postpaid.



White Velvet Okra.

Choice Onion Seed

CULTURAL DIRECTIONS. One ounce to 100 feet of drill; about four pounds to the acre. Onions for the market are generally grown on muck land in Michigan, but may be grown for home use on any rich, loamy soil. They appreciate plenty of fertilizer on muck; the market growers apply heavily about a 10-10 fertilizer. Drill in rows about a foot apart. As soon as the weeds appear, weed carefully and give shallow cultivation. Sow as early as possible in Spring.

★**Southport Yellow Globe** Bulbs nearly round, but slightly longer than Yellow Globe Danvers. Not quite so early, but much heavier yielder and not flat across the bottom. Color beautiful golden; the best main crop sort. Oz., 15c; ¼ lb., 50c; 1 lb., \$1.75, postpaid.

★**Connecticut Yellow Globe Onions** Onions are round, globe shaped. Not so long as the Southport, but said to be much better keepers. Very few stiff necks, rich yellow color. Will keep well into the Spring months. Seed grown in Connecticut. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

Michigan Yellow Globe Earlier than Southport, but more flat across the bottom. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

Ohio Yellow Globe The best of the Yellow Globe varieties. The skin is bright, glossy, orange-yellow, and the flesh is white, and fine grained. The bulbs are remarkably uniform in size and shape, and being firm and hard possess fine keeping and shipping qualities. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

Riverside Sweet Spanish (Valencia). Nearly globular in form, resembling Prize-taker, but grows to a larger size. Golden yellow in color of skin; flesh white, unusually mild but still retains its genuine Onion flavor. When thoroughly cured it is a good keeper and will ship as well as any other shipping Onion. Oz., 30c; ¼ lb., 90c; 1 lb., \$3.00, postpaid.

Prizetaker or Mammoth Yellow Spanish Very large, and nearly round, light straw color, very mild and sweet. Late. Oz., 20c; ¼ lb., 65c; 1 lb., \$2.10, postpaid.

Yellow Globe Danvers A very popular dependable variety. Is an exceptional keeper. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

★**Southport White Globe** Of the true Southport form, with a thin, delicate skin of purest paper whiteness; flesh is very crisp, snowy white in color and exceedingly mild; usually commands the highest price in the market. Oz., 25c; ¼ lb., 80c; 1 lb., \$2.75, postpaid.

White Barletta One of the earliest, handsomest and smallest of the white pickling Onions. Makes a good bunching sort. Oz., 30c; ¼ lb., 90c; 1 lb., \$3.00, postpaid.

White Portugal or Silverskin An early flat, white onion of mild flavor. Used mostly to grow sets. Oz., 25c; ¼ lb., 75c; 1 lb., \$2.50, postpaid.

White Welsh While it forms no bulbs it is one of the best for bunching as green onions. A very hardy perennial. The white shoots make a rapid growth and are ready for market ahead of those from sets. Very mild and delicate in flavor. Oz., 25c; ¼ lb., 75c; 1 lb., \$2.50, postpaid.

★**Southport Red Globe** Same shape as the Southport Yellow but color very dark. Better keeper than the Yellow, but not so good a seller. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

Red Wethersfield One of the oldest and best known American type, large, rather flat, deep purplish red in color. Oz., 20c; ¼ lb., 60c; 1 lb., \$2.00, postpaid.

Onion Sets

Sets are used where an early crop of Onions is desired; either for the early green bunching Onions or the matured Onions in the Fall. These sets are the best that can be procured, but shipment cannot be made before March 1st on account of freezing weather.

Yellow Bottom Sets. Write for prices.

White Silverskin Sets. Write for prices.

Red Bottom Sets. Write for prices.

Egyptian or Perennial Top Sets, write for prices.



Champion Moss Curled Parsley.

Parsnips

CULTURAL DIRECTIONS. One ounce will sow 100 feet of drill; three to four pounds per acre. Sow in April or May. Parsnips require a long season to mature. Sow thickly, thin as for Carrots. Seed does not germinate well unless conditions are just right.

Hollow Crown Thick shoulder. This variety is better known and more generally grown than any other sort; roots smooth, tender and sugary. Oz., 10c; ¼ lb., 30c; 1 lb., 90c, postpaid.

Long Smooth Dutch or Sugar Roots very long, slim and much sweeter than the Hollow Crown. Oz., 10c; ¼ lb., 30c; 1 lb., 90c, postpaid.



Hollow Crown Parsnips.

Parsley

CULTURAL DIRECTIONS. One ounce to 150 feet of drill. Seed germinates very slowly. Sow thickly in rows about 15 inches apart, and thin to four or five inches apart in the row. Parsley will live through the Winter without protection, and provide plenty for early Spring use, but will soon go to seed. Will last longer the second year if sown in the Fall.

Champion Moss Curled Has the appearance of finely curled moss; hardy, slow to run to seed. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Triple Curled Plant handsome, beautifully curled and rapid grower. Will produce a large crop. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Hamburg Rooted Grown for the root which resembles a parsnip in shape and color. Foliage very much like plain parsley. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Garden Peas

CULTURAL DIRECTIONS. One quart will plant 100 feet of drill; about 56 pounds per acre. Peas do best on rich, sandy loam that has been well manured the previous season. Plant smooth, early sorts as soon as the ground can be worked in the Spring. The wrinkled varieties are liable to rot if the soil is cold and wet, and should be planted later.

★ **Dark Podded Sutton's Excelsior** An excellent extra early, dwarf variety, of highest quality. Height 14 inches, foliage dark green. Vine stout and healthy. Pods $3\frac{1}{2}$ inches long, straight, round and square ended, containing six to eight large, dark green peas. Exceedingly productive. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.25; pk., \$2.75; bu., \$10.00.

Little Gem A second early, hardy variety. Prolific, bearing pods on both sides of the stalk, beginning near the ground. Pods medium length, round, and well filled to the end. Height of vine about fifteen inches. Seed green, wrinkled. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.00; pk., \$2.50; bu., \$9.00.

★ **Little Marvel** One of the most prolific of the second early sorts. Pods long, 3 to 4 inches, well filled with deliciously sweet peas. Vines about 15 inches in height. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.25; pk., \$2.75; bu., \$10.00.

Alaska A small, smooth blue Pea, and one of the earliest. Grown largely by canners and market gardeners for early crop. Vines about two feet in height, pods small, but well filled. Can nearly all be harvested at one picking. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.00; pk., \$2.50; bu., \$9.00.

★ **Alderman** A little later than the Telephone. Vines about four feet in height; very heavy foliage. One of the most productive sorts. Pods long, dark green, well filled; seed wrinkled. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.00; pk., \$2.50; bu., \$9.00.

Dwarf Telephone A splendid main crop Pea, coming between the Telephone and Stratagem. Of the Stratagem type, but a heavier yielder. Height 2½ feet. Foliage very heavy, sturdy and dark green. Pods $4\frac{1}{2}$ inches long, dark green, broad, straight and pointed, containing nine large, medium dark green peas of the best quality. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.25; pk., \$2.75; bu., \$10.00.

★ **World's Record** A new variety on the order of Gradus, which it resembles in many ways; might well be considered an improvement on that sort, being slightly earlier, more productive and true to a fixed type. Grows about 2 feet in height, with large, dark green pods nearly 4 inches in length, broad, pointed and always well filled with large, sweet peas of splendid quality. An excellent profitable sort for home or market garden. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.25; pk., \$2.75; bu., \$10.00.

★ **Improved Laxtonian** The best of the Laxtonian type. Second early. A little earlier than the Gradus. Vine 16 inches high, sturdy, dark green and productive; pods dark green, four inches broad, containing eight large peas of excellent quality. The best second early, big-podded sort. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.25; pk., \$2.75; bu., \$10.00.

★ **Thomas Laxton** One of the best second early sorts for the market gardeners. Vines of same height as the Gradus, but a little earlier, more hardy and productive. Pods long, blunt ended and well filled with large peas. Peas wrinkled. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.25; pk., \$2.75; bu., \$10.00.

Telephone A standard high quality, large-podded Pea, for main crop; productive; height 4½ feet. Vine and foliage strong and heavy, medium green. Pods $4\frac{1}{2}$ inches long, medium green, straight, broad and pointed, well filled. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.00; pk., \$2.50; bu., \$9.00.



★ Thomas Laxton Peas.

American Wonder One of the earliest and sweetest wrinkled Peas. Vines very dwarf and productive. Pods small, but well filled. The most delicious Pea for the home garden. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.00; pk., \$2.50; bu., \$9.00.

Nott's Excelsior A standard extra early dwarf Pea. Height about one foot; foliage medium green, stout and heavy, pods light green, three inches long, round, straight and blunt ended, containing six light green peas of high quality; productive. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.25; pk., \$2.75; bu., \$10.00.

Champion of England Vines 4 to 5 feet in height, productive. Pods 2 to 3 inches long, broad and well filled. Peas medium size, of unsurpassed sweetness. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.00; pk., \$2.50; bu., \$9.00.

Edible Pod Sugar Peas

The pods of the two varieties listed below are cooked with the peas. They have a high sugar content and make a delicious dish, and once tried, they will be regularly grown.

Dwarf Gray Sugar A dwarf, edible pod variety. Vines about two feet high. Cook pods like string beans. Lb., 30c, postpaid. Not prepaid, 5 lbs., \$1.25; pk., \$2.75; bu., \$10.00.

Melting Sugar, or Edible Pod A tall variety, bearing large, flat, brittle pods. These are sweet and are cut or broken and cooked like string beans. It is a delicious vegetable and should be better known and more generally used. Lb., 40c, postpaid. Not prepaid, 5 lbs., \$1.40; pk., \$3.00; bu., \$11.00.



★ Chinese Giant Pepper.

Peppers

CULTURAL DIRECTIONS. One ounce will produce about 2,000 plants; about 7,000 plants for an acre. Sow seed in hotbeds from February to April; transplant to open ground when all danger from frost is past, in rows about three feet apart and eighteen inches apart in the row. Seed can be sown in the open ground late in May, and thinned as above. Cover seed about half an inch.

★ **Harris Earliest** The earliest large pepper grown. Plant dwarf, compact in habit of growth. Most prolific. Peppers bell-shaped, about 4 inches long. They produce an enormous crop of fruits, which are perfectly mild and sweet. Oz., 45c; ¼ lb., \$1.40; 1 lb., \$5.00, postpaid.

Early Giant (Harris). The earliest and most prolific of all large Peppers. Slightly later than Harris' Earliest, is of dwarf, compact growth, bearing as many as 12 pendent fruits on a single plant. Fruit scarlet, measuring 5 inches long by 3½ inches in diameter; 3-lobed, mild and sweet. A profitable pepper for the market. Oz., 45c; ¼ lb., \$1.40; 1 lb., \$5.00, postpaid.

Chinese Giant Mammoth fruits, 12 to 15 inches in circumference. Flesh thick, tender, mild and sweet. Oz., 50c; ¼ lb., \$1.75; 1 lb., \$6.00, postpaid.

Bull Nose or Large Bell Large, bell-shaped, thick-fleshed fruit. Good for Mango pickles. Oz., 35c; ¼ lb., \$1.00; 1 lb., \$3.50, postpaid.

CULTURAL DIRECTIONS. One ounce of seed for 20 hills. About 3 pounds per acre. Usually grown in cornfields, but can be grown as a separate crop. Seed should be planted in hills eight to ten feet apart each way, after soil gets warm. Cultivate often until vines begin to run. Cut pumpkins after leaves die, leaving three to four inches of stem attached to fruit. Store in a dry place, and do not bruise.

Connecticut Field Generally used for planting in corn for stock feeding; also makes good pies. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

King of the Mammoths The giant among pumpkins. Often grows two feet or more in diameter. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Sugar Pie Fruit small, round, flattened at the ends, and slightly ribbed. Skin and flesh deep

Long Red Cayenne Pendent fruits about five inches long and three-fourths inch in diameter at the base, often curved and twisted; bright red, hot and pungent. Oz., 40c; ¼ lb., \$1.10; 1 lb., \$4.00, postpaid.

Royal King A new sweet pepper of the Ruby King type. The fruit will average 4 inches in length, is deep green in color, turning a bright red when ripe. The flesh is thick and sweet. Oz., 45c; ¼ lb., \$1.40; 1 lb., \$5.00, postpaid.

Ruby King One of the most profitable and satisfactory varieties for the home or market garden, plants are early, productive and of dwarf compact, upright growth, fruits pendent, often 4 to 6 inches long by 3 to 4 inches thick, tapering end of a bright ruby-red color; flesh is thick, mild and sweet. Oz., 35c; ¼ lb., \$1.00; 1 lb., \$3.50, postpaid.

World Beater The most prolific large Pepper. Fruit very large, about five inches long. Flesh thick, mild and sweet. Pepper tapering and of a bright ruby color when ripe and very attractive. Oz., 35c; ¼ lb., \$1.00; 1 lb., \$3.75, postpaid.

Long Red Chili One-half inch in diameter, four to five inches long; earlier than the Cayenne; hot and pungent. Oz., 50c; ¼ lb., \$1.50; 1 lb., \$5.00, postpaid.

Red Chili Small, red, cone-shaped. Very hot and prolific. Used for seasoning. Oz., 40c; ¼ lb., \$1.25; 1 lb., \$4.00, postpaid.

Pimento A rather late, very thick-fleshed, heart-shaped, smooth, mild, crimson variety; much used for salads. Oz., 40c; ¼ lb., \$1.25; 1 lb., \$4.00, postpaid.

Sweet Golden Dawn A handsome, sweet, mild, yellow variety; fruit pendent, 1½ inches long and about the same in diameter. Oz., 40c; ¼ lb., \$1.25; 1 lb., \$4.00, postpaid.



Compare the vigor of the mulched Pepper plant at the right with the unmulched one at the left.

Pumpkins

CULTURAL DIRECTIONS. One ounce of seed for 20 hills. About 3 pounds per acre. Usually grown in cornfields, but can be grown as a separate crop. Seed should be planted in hills eight to ten feet apart each way, after soil gets warm. Cultivate often until vines begin to run. Cut pumpkins after leaves die, leaving three to four inches of stem attached to fruit. Store in a dry place, and do not bruise.

Connecticut Field Generally used for planting in corn for stock feeding; also makes good pies. Oz., 10c; ¼ lb., 20c; 1 lb., 75c, postpaid.

King of the Mammoths The giant among pumpkins. Often grows two feet or more in diameter. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Sugar Pie Fruit small, round, flattened at the ends, and slightly ribbed. Skin and flesh deep

orange-yellow. Flesh very thick and of high quality. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Japanese Pie A large crook-necked sort. Skin green, striped yellow. Flesh yellow and of fine quality. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Winter Luxury Round, medium in size, with a golden yellow skin closely netted like a netted muskmelon; sweet and finely flavored and an exceptionally good keeper. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Golden Oblong One of the best pie and canning pumpkins. Oblong in shape, averaging about twenty by ten inches. Skin golden yellow and very tough, making an excellent keeper. Flesh very thick, yellow and of fine quality and never stringy. Heavy yielder and fruit solid and heavy. Oz., 10c; ¼ lb., 25c; 1 lb., 75c, postpaid.

Radishes

CULTURAL DIRECTIONS. One ounce to 100 feet of drill; about five pounds to the acre. Sow in rows about 12 inches apart in rich, sandy loam. Use no fresh manure, as the radishes will not grow smooth and will be wormy. Later sowings can be made at intervals during the Summer. Seeds of Winter radishes should be sown in July or August, and radishes can be kept during the Winter if covered with sand and kept in a cool cellar.

★ **Grand Rapids Forcing** New, improved. The best greenhouse variety and the earliest of the Scarlet Globe type, but superior in every way for greenhouse forcing. When properly grown it is the most handsome and best forcing sort with the shortest top and the Radishes are ready to pull before you realize it on this account. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

★ **Vick's Scarlet Globe** We have an exceptionally fine stock of this grand variety, which has been tested by having crops grown both in greenhouses and outdoors. Our new stock will not be sold until it is tested. It is one of the earliest of the forcing radishes, and does equally as well for outdoor culture. Roots are globe-shaped, of fair size, not apt to be pithy, small tops, crisp and tender. Color a bright scarlet. Oz., 10c; ¼ lb., 30c; 1 lb., 90c, postpaid.

Crimson Giant Larger than any other extra early variety but does not become pithy. Crimson-carmine, turnip shaped, flesh firm, crisp and tender. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

Cincinnati Market Grows straight and smooth, 6 to 7 inches long. The tops are small, the skin a beautiful scarlet, very thin flesh, crisp and brittle. Wonderful flavor. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

French Breakfast Of oblong shape, small, quick growing, color rose-scarlet, with small white tip. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

Scarlet Turnip White Tipped Round, deep scarlet, shading to a white tip at the bottom. Very early. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.



★ Grand Rapids Forcing Rad'sh.

Long Scarlet Short Top Roots are smooth and tender with very short tops. Color bright carmine red. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

Half-Long Deep Scarlet A half long, of a beautiful deep scarlet color. Does not become pithy as soon as long scarlet varieties. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

White Globe One of the best of the white varieties, either for forcing or out-door culture; more round than turnip-shaped; intermediate in size, always crisp, fine grained and tender. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

★ **Icicle** One of the earliest long varieties, white throughout. Very crisp and tender. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

★ **Cooper's Sparkler** White tip, quite similar to Scarlet Turnip White Tip as to size and time of maturity, only the Sparkler is more round or ball-shaped, and the white extends farther up the Radish, making a more attractive bulb. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.



White Icicle Radishes.



★ Vick's Scarlet Globe Radishes.

The Best Winter Radishes

White Winter (Celestial). Roots six to eight inches long, thick, cylindrical and smooth, with a beautiful white skin and flesh, the whitest and least pungent of the winter radishes. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

Chinese Rose Winter Roots four or five inches long, blunt at both ends, about two inches thick. Skin smooth and bright, deep rose color. Flesh white and crisp. One of the best Winter sorts. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

Long Black Spanish One of the latest and hardiest varieties for Winter use; roots eight to nine inches long, two to three inches in diameter, and nearly black in color. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

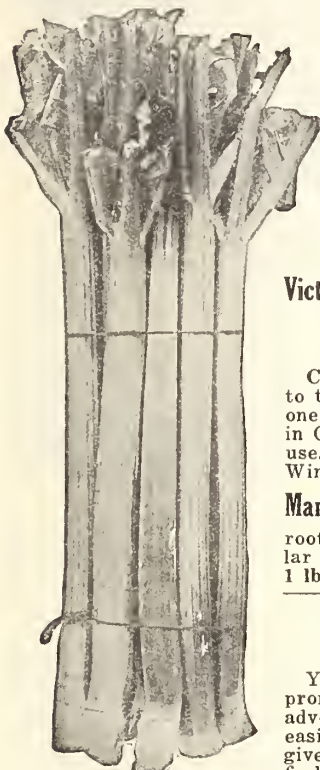
Round Black Spanish Round, three to four inches in diameter. Skin almost black; flesh white, crisp and pungent. Oz., 10c; ¼ lb., 25c; 1 lb., 90c, postpaid.

Rutabagas

CULTURAL DIRECTIONS. One ounce to 100 feet of drill; one pound to the acre, if sown in drill rows. Spring sowing should be done very early, so that the 'bagas may get their growth before hot weather, or they will be pithy and bitter. For main crop sow in July or August.

American Purple Top A hardy, productive variety, with small neck. Roots are large, globe-shaped, with small tap-root. Color bright yellow with purple top. Flesh solid, tender and sweet. Oz., 10c; $\frac{1}{4}$ lb., 25c; 1 lb., 75c, postpaid.

Long Island, Improved Grows large, top-shaped, purple top, flesh yellow. Used for stock feeding or table use where a large Rutabaga is wanted. Oz., 10c; $\frac{1}{4}$ lb., 25c; 1 lb., 75c, postpaid.



Victoria Rhubarb.

Rhubarb

CULTURAL DIRECTIONS. One ounce will produce 100 plants. The seed should be sown in the Spring in rows about eighteen inches apart and transplanted the next Spring to permanent beds. Roots should be planted three or four feet apart, and well manured, either with well-rotted stable manure or Pulverized Hen Manure. Give thorough cultivation.

Victoria One of the best market sorts; stalks a beautiful red. Oz., 20c; $\frac{1}{4}$ lb., 50c; 1 lb., \$1.75, postpaid.

Salsify or Vegetable Oyster

CULTURAL DIRECTIONS. One ounce to 75 feet of drill; five or six pounds to the acre. Sow the seed early in the Spring in drills twelve inches apart and one inch deep. Thin to four or five inches apart. The roots will be ready for use in October, when a supply should be taken up and stored like carrots for Winter use. Like parsnips, they may be left in the ground all Winter and dug as soon as the ground is thawed.

Mammoth Sandwich Island A splendid variety producing large, thick, tapering white roots, very uniform, mild and delicious in flavor. A popular sort with the market gardeners. Oz., 20c; $\frac{1}{4}$ lb., 60c; 1 lb., \$2.00, postpaid.

Your Garden

Your garden and what you raise is getting more prominent every day. Many of the Women's Clubs are advocating planting a garden, and many varieties are so easily grown that a few small rows of each kind will give you the fresh, succulent vegetables that you cannot find in any market or grocery store. While we do not put out packet seeds, as such, we do offer to give you in thoroughly tested seeds

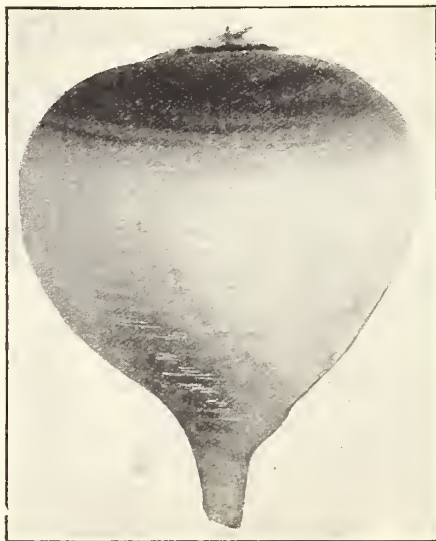
12 Large Size Packets of Any Kind of Vegetable Seeds Postpaid for \$1

Our seeds are all put up out of our bulk stock and you are assured of the best. Below we give you a suggestive list:

- | | |
|--|--|
| 1 pkt. Leaf Lettuce, Early Curled Simpson. | 1 pkt. Beans, Pencil Pod Black Wax. |
| 1 pkt. Radish, Vick's Scarlet Globe. | 1 pkt. Cucumber, Early Fortune. |
| 1 pkt. Carrots, Chantenay. | 1 pkt. Sweet Corn, Early Evergreen. |
| 1 pkt. Beets, Crosby's Egyptian. | 1 pkt. Peas, Early Alaska. |
| 1 pkt. Cabbage, Early Copenhagen Market. | 1 pkt. Spinach, Round Summer Thick Leaf. |
| 1 pkt. Swiss Chard, Lucullus. | 1 pkt. Turnip, Purple Top White Globe. |

We have only given you the variety to let you know what we would advise; however, if you desire to make your own selection, do so, as you may have a preference that we are not aware of.

Our Prize Winning Flower Seed Collection is found on the inside back cover. If you love flowers, avail yourself of this offer.



American Purple Top Rutabaga.



Salsify.

Spinach

Pure Seed, and Improved Varieties

Cultural Directions. One ounce to 100 feet of drill; eight to ten pounds per acre. Sow thinly in drills, twelve to fifteen inches apart and about half an inch deep. Thin plants to four inches apart in the row. Sow early for Spring crop, in August for Fall use; and if sown from the middle to last of September, and protected during the Winter with a light covering of straw, it will be ready for use very early in the Spring.

Long Standing Bloomsdale Savoy A new strain worthy of merit. It is early and hardy and a decided improvement on the old strain. Will stand ten to fourteen days longer before bolting into seed; has a heavier leaf texture, more crumpled or savoyed and will also resist the heat much better. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 45c, postpaid.



Virginia Savoy Blight-Resistant Spinach.

Virginia Savoy Blight-Resistant Spinach Was originated by the Virginia Truck Experiment Station. It is the result of years of scientific work by the experiment station, and has proved a great success the past three years. It is a decided improvement over Bloomsdale or Norfolk Savoy, as its blight-proof qualities and correct habit of growth make it more valuable to the grower than any other variety. Virginia Savoy is characterized by the large leaves and general Flanders type of growth. The low-growing, wide-spreading habit makes it most desirable for Winter Spinach. Plants of this type attain a very large size in late Fall and carry well into early Spring. A single plant often weighs more than a pound. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 40c, postpaid.

Round Summer Thick Leaved An old standard. Grand Rapids growers use this variety very largely for main crop for Spring, Summer and Fall. Oz., 10c; $\frac{1}{4}$ lb., 15c; 1 lb., 35c, postpaid.

★ **Victoria** Makes a flat rosette with very short stems. The leaves are large, thick and wrinkled, blunt or rounded, and dark green in color. Stands hot weather well; slow to go to seed. Oz., 10c; $\frac{1}{4}$ lb., 15c; 1 lb., 35c, postpaid.



King of Denmark Spinach.

★ **King of Denmark Spinach** A standard variety for market gardeners, for Spring planting. It will stand longer than any other variety before going to seed. Leaves large, rounded, and somewhat blistered. Color very deep green. Heavy yielder and excellent quality. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 45c, postpaid.

New Zealand Entirely distinct from the true Spanish; plant tall and spreading, leaves medium green, rather small and pointed, grows well in hot weather and under adverse conditions. Oz., 15c; $\frac{1}{4}$ lb., 25c; 1 lb., 60c, postpaid.

Princess Juliana A new and better variety for the market gardener. It is said to be the most thoroughbred type of long standing Spinach ever introduced. In form it is a dense, compact rosette with very short petioles; the leaves are large and rounded, thick in texture, very much blistered and crumpled and of an intense, very dark green color; will hold up well in shipping and is slow to run to seed. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 45c, postpaid.



Thick Leaved Spinach.

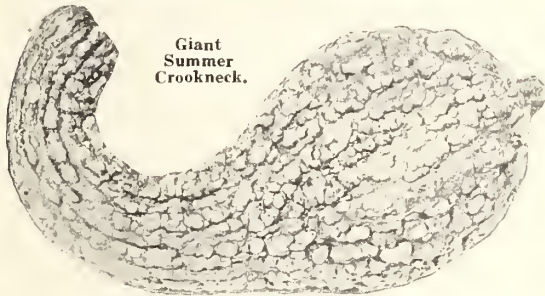
★ This variety recommended by the Michigan State College.

Squash

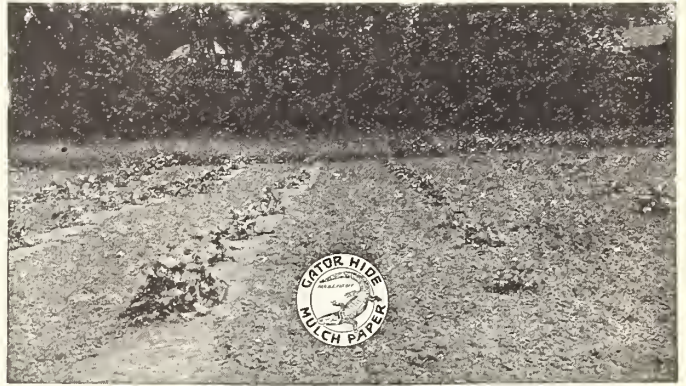
CULTURAL DIRECTIONS. For Summer Squash, one ounce to 25 hills; two to three pounds per acre. For Winter Squash, one ounce to ten hills; about three pounds per acre. After danger of frost is past, plant eight to ten seeds to the hill for Summer sorts, about four feet apart, the last of May; and Winter varieties in hills about eight feet apart, from the middle of June to July first. Do not bruise or break the stems of Winter Squash when gathering. Store in a cool, dry place.

Giant Summer Crookneck The largest and one of the earliest Summer varieties; fruits often 2 to 2½ feet long, very warty and deep orange in color. Oz., 15c; ¼ lb., 35c; 1 lb., \$1.25, postpaid.

Golden Summer Crookneck A standard early and productive Summer Squash; fruits about a foot long, moderately warted and of a bright yellow color. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.10, postpaid.



Giant Summer Crookneck.



The growth of the Hubbard Squash on the left was very markedly increased by the use of Gator-Hide Mulch Paper.

Table Queen A Squash fit for a Queen. Cut in half and baked for twenty minutes, it is delicious. Wonderful producer. Fruits are from 6 to 8 inches long and 4 to 6 inches in diameter. Shell hard and smooth, dark green with sometimes a blotch of red at pointed end. Will keep as long as the Hubbard. Oz., 15c; ¼ lb., 50c; 1 lb., \$1.50, postpaid.

Early White Bush Scallop Very early Summer Squash, also known as Patty Pan. Oz., 15c; ¼ lb., 35c; 1 lb., \$1.25, postpaid.

Early Yellow Bush Scallop A true bush. Earlier and smaller than the above. Oz., 15c; ¼ lb., 35c; 1 lb., \$1.25, postpaid.

Pike's Peak, or Sibley A vigorous prolific old standard, oval shape, tapering at the blossom end, skin dark green. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

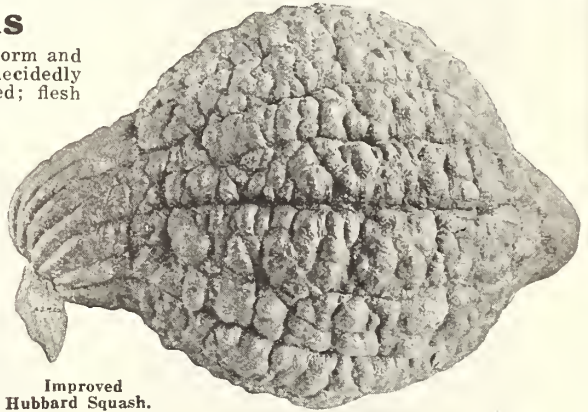
The Four Hubbards

Golden Hubbard Similar to the old Hubbard in form and habit, though smaller and decidedly earlier; shell moderately warted, rich orange-red; flesh deep orange, of fine quality; good keeper. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.25, postpaid.

Improved Hubbard The standard Winter Squash. Shell moderately warted; deep dark bronze-green; flesh bright yellow, fine grained, thick and dry. Oz., 15c; ¼ lb., 45c; 1 lb., \$1.35, postpaid.

Chicago Warted Hubbard Similar in quality and form to the Hubbard, but fruit larger and a little later. Oz., 15c; ¼ lb., 45c; 1 lb., \$1.35, postpaid.

Blue Hubbard A new type of Hubbard Squash and said to excel all in the superior quality of its flesh. Similar to the original Hubbard but having a hard blue-gray shell. Oz., 15c; ¼ lb., 45c; 1 lb., \$1.35, postpaid.



Improved Hubbard Squash.

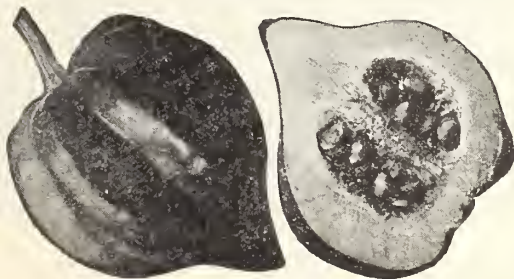


Table Queen Squash.

Italian Cucuzzi Caravazzi A long light green variety, much in demand for Italian trade. Oz., 50c; ¼ lb., \$1.50; 1 lb., \$5.00, postpaid.

Cocozella di Napoli (Italian Vegetable Marrow). A bush summer variety, oblong, large. Dark green marbled with yellow and dark green stripes. A vegetable delicacy superior to eggplant. Oz., 15c; ¼ lb., 40c; 1 lb., \$1.50, postpaid.

Boston Marrow Fall and Winter variety, oval, color when ripe bright orange, fine grained and excellent flavor. Oz., 10c; ¼ lb., 30c; 1 lb., \$1.00, postpaid.

Delicious A Fall and Winter variety, medium size, top-shaped, dark green, flesh orange, very deep and delicious. Oz., 15c; ¼ lb., 45c; 1 lb., \$1.35, postpaid.

Select Tomato Seed



★ Grand Rapids Forcing Tomatoes.
This plant produced 19 lbs. of marketable fruit.

CULTURAL DIRECTIONS. One ounce will produce about 3,000 plants; about 5,000 plants to the acre. Tomatoes do best on warm, sandy, rich soil, and make a rapid and unchecked growth in the early part of the season. For main crop, sow seed in greenhouses or hotbeds from the middle of March to the first of April. Transplant to the open field from last of May to June first.

★ Grand Rapids Forcing

The Grand Rapids Forcing is as great an acquisition to the line of forcing vegetables as was the Grand Rapids Forcing Lettuce. The intense sexual vigor of the plant causes a great production of pollen, and insures an immense setting of fruit. It is probably the only tomato that is self-fertilizing. Plant is a vigorous, robust grower, and should be trimmed to about six feet in height. The fruit is a good red color, fair size, firm and meaty. Skin is tough and it will stand shipping for long distances. Under favorable growing conditions each plant should produce eight pounds of marketable fruit. Oz., \$1.50; ¼ lb., \$5.00; ½ lb., \$8.00, postpaid.

Grand Rapids Forcing Select Growers Strain. This strain is the result of years of careful plant selection and breeding by one of our growers. He has developed a superior tomato, larger in size and better in quality as well as flavor. This seed was taken from greenhouse grown tomatoes. Oz., \$2.00; ¼ lb., \$7.50; ½ lb., \$12.50, postpaid.

Ideal Forcing A new forcing variety originated by Mr. John Nellis of Grand Rapids, Mich. Mr. Eugene Davis and Prof. Waide, now of Ohio, selected the original parent plant of the Ideal Tomato. It is the result of crossing the Bonny Best with the Comet and has the heavy yielding quality and tough skin of the Comet and the high color of the Bonny Best. Mr. Nellis has selected and re-selected the plants until it has arrived at a high state of purity and breeds absolutely true to type. The plant does not grow as tall as the Grand Rapids Forcing but will yield as many pounds per plant. It has no green, unripe core, is dark red in color, not an acid fruit but of excellent quality, and is a larger Tomato and a splendid shipper. During the past year ideal results have been obtained in the greenhouse. Oz., \$3.00; ¼ lb., \$10.00, postpaid.

★ **Bonny Best** As early as Chalk's Jewel. Fruit smooth, solid and uniform. Produced in clusters in center of plant. One of the most productive; color bright red; good shipper. Oz., 30c; ¼ lb., 90c; 1 lb., \$3.00, postpaid.



★ Bonny Best Tomatoes.

★ This variety recommended by the Michigan State College.



★ John Baer Tomatoes.

★ **John Baer** An early, productive, red tomato, on the order of the Chalk's Jewel. Splendid producer. Oz., 30c; ¼ lb., 90c; 1 lb., \$3.00, postpaid.

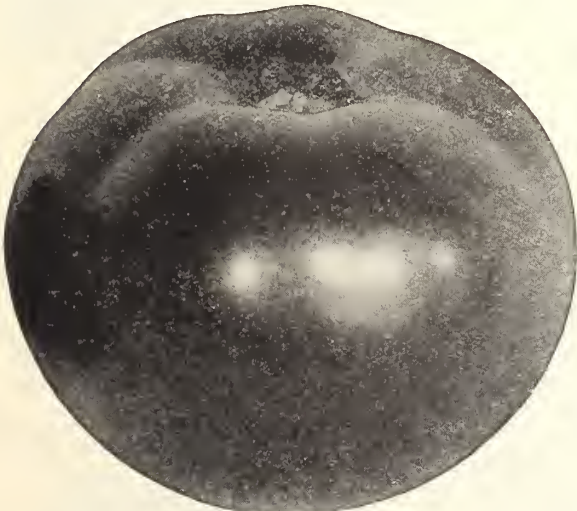
Dwarf Stone The best of the dwarf tomatoes. Fruits large, smooth, very solid, of a deep scarlet color. Oz., 50c; ¼ lb., \$1.50; 1 lb., \$5.00, postpaid.

Marglobe The Wilt and Nailhead Rust-Resistant Sort. Was produced by crossing the Livingston Globe with one or more other varieties. It is a vigorous grower whether in greenhouse or field. A bright red in color, of large size, almost round, and very productive. It is very promising. Oz., 60c; ¼ lb., \$1.75; 1 lb., \$6.00, postpaid.

Break o'Day (New). The earliest disease-resistant, scarlet-fruited, meaty Tomato yet introduced, 10 to 12 days earlier than Marglobe and very productive. Fruits are of the Marglobe type, deep globe-shaped, solid, meaty, with few seeds and a beautiful scarlet color. Excellent for home gardens, truck farmers or canners. Try it. ¼ oz., 60c; oz., \$2.00; ¼ lb., \$7.00; 1 lb., \$25.00, postpaid.

Stone The standard and general favorite with truckers and canners, always dependable, very vigorous and productive, fruits round, large, solid, smooth and deep red in color. Oz., 30c; ¼ lb., 85c; 1 lb., \$3.00, postpaid.

Ponderosa A very large, purple-fruited tomato; solid, with but few seeds, and not acid. Fine for slicing. Oz., 40c; ¼ lb., \$1.30; 1 lb., \$5.00, postpaid.



Marglobe Tomato.

Earliana The most productive, first early red tomato and a profitable sort for the market gardener. Vines are small but vigorous, fruits medium to large in size, exceptionally smooth and solid; color bright deep scarlet. Oz., 30c; ¼ lb., 90c; 1 lb., \$3.00, postpaid.

Chalk's Early Jewel An exceptionally fine early variety. About ten days later than the Earliana. Fruit round, smooth and solid. Color crimson. Extremely productive. Oz., 30c; ¼ lb., 90c; 1 lb., \$3.00, postpaid.

Red Rock A dependable, large, second early variety. A favorite canning sort. Oz., 30c; ¼ lb., 90c; 1 lb., \$3.00 postpaid.

Landreth An early and exceedingly choice variety. Very productive, fruit large and solid. Oz., 30c; ¼ lb., 90c; 1 lb., \$3.00, postpaid.

Wayhead A potato-leaved Earliana. Earlier than the Earliana. Smooth red fruit and very prolific; has the heavy yielding qualities of the Earliana and fruit much better. Oz. 50c; ¼ lb., \$1.50; 1 lb., \$5.00, postpaid.



Tomato plants nine weeks old. Planted with the same seed. The use of Gator Hide Mulch Paper gave an increased yield of better than 44 per cent.

Matchless A fine, smooth, main crop tomato of rich cardinal-red color, with solid flesh of finest quality. Oz., 30c; ¼ lb., 90c; 1 lb., \$3.00, postpaid.

Red Head A large globe-shape, bright scarlet tomato. Fruit is very smooth, meaty, runs quite uniform size, very productive. Oz., 35c; ¼ lb., \$1.15; 1 lb., \$4.00, postpaid.

June Pink Similar in all respects to Earliana, differing only in having purple fruit: the best extra early purple variety. Oz., 40c; ¼ lb., \$1.30; 1 lb., \$5.00, postpaid.

Small Tomatoes

Excellent for preserves, pickling, etc.

YELLOW PLUM	¼ oz., 15c postpaid
RED PEAR	¼ oz., 15c postpaid
YELLOW PEAR	¼ oz., 15c postpaid
RED PEACH	¼ oz., 15c postpaid

Turnips

CULTURAL DIRECTIONS. One ounce to 150 feet of drill; one pound per acre. For main crop, sow in July or August. Sow either broadcast or in drills.

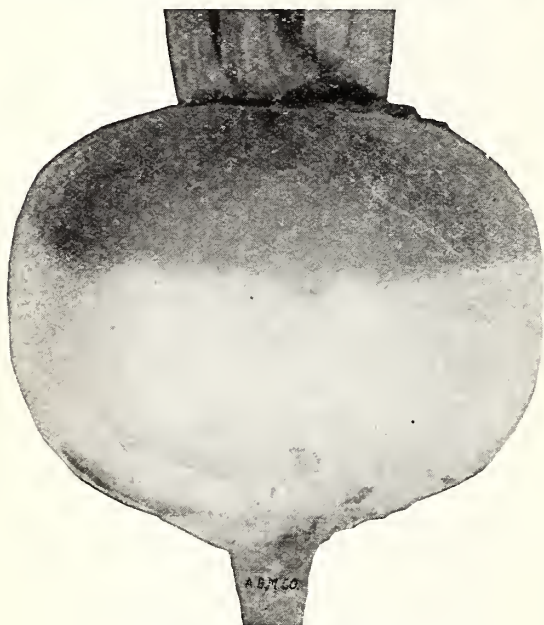
Extra Early White Milan The earliest bulbs, small, clear white, and flat. One of the best for early bunching. Oz., 10c; $\frac{1}{4}$ lb., 30c; 1 lb., \$1.00, postpaid.

White Egg An early egg-shaped variety. Roots smooth, clear white. One of the best for market. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 70c, postpaid.

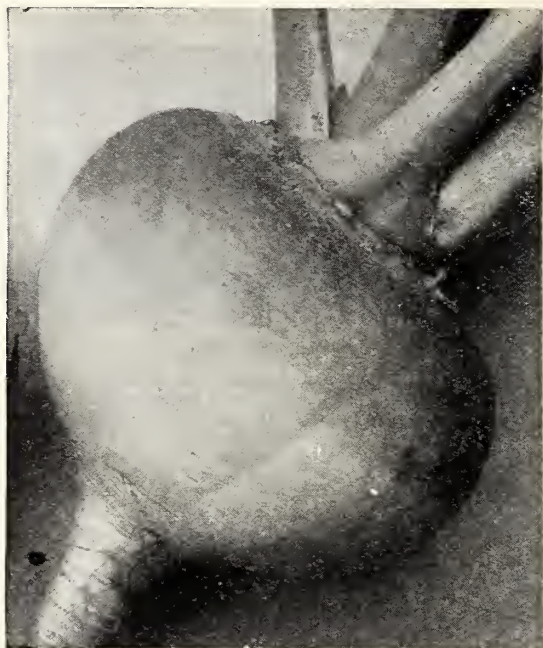
Purple Top White Globe Not so early as White Egg, perfect globe in shape. Flesh and skin white, colored purple or red above ground. Very fine grained and sweet. The most attractive turnip and best seller. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 70c, postpaid.

Purple Top Strap Leaved A very early, flat variety, medium size; purple or red above ground and white below. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 60c, postpaid.

Cow Horn Roots long, slightly crooked; clear white. Often sown to plow under for fertilizer. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 60c, postpaid.



Purple Top White Globe Turnip.



Purple Top Strap Leaved Turnip.

Robertson's Golden Ball Tops small, roots medium size, round, smooth and deep yellow. Fine grained, flesh firm, crisp and sweet. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 70c, postpaid.

Yellow Aberdeen A late, medium sized, long keeping variety, roots round, yellow with a purple top, flesh tender. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 60c, postpaid.

Purple Top Milan Extremely early and of splendid quality, medium size, flat and white, with bright purple top; strap leaved. Oz., 10c; $\frac{1}{4}$ lb., 30c; 1 lb., \$1.00, postpaid.

Yellow Globe A round, smooth, light yellow variety of medium size and good quality. Oz., 10c; $\frac{1}{4}$ lb., 20c; 1 lb., 70c, postpaid.

Tobacco

Connecticut Seed Leaf A hardy cigar variety for home use. Oz., 40c; $\frac{1}{4}$ lb., \$1.25; 1 lb., \$4.00, postpaid.

Fine Havana Finest strain of imported seed. Oz. 60c; $\frac{1}{4}$ lb., \$1.75; 1 lb., \$6.00, postpaid.

Herbs

For early use, sow seed in hotbed or in open ground in May, in rows one foot apart. Cover very lightly and thin to six inches apart in the row. They should be cut on a dry day, just before they come into full blossom. Tie in bunches and keep where they will dry quickly.

ANISE. Used for flavoring. Oz., 15c, postpaid.

CARAWAY. Seeds used for flavoring. Oz., 15c, postpaid.

CORIANDER. Seeds used for flavoring. Oz., 10c, postpaid.

DILL. Used for flavoring pickles. Oz., 15c, postpaid.

SWEET MARJORAM. Used for seasoning. Oz., 20c, postpaid.

SAGE. Very aromatic. Oz., 40c, postpaid.

SUMMER SAVORY. Leaves used for flavoring soups. Oz., 20c, postpaid.

THYME. Used for seasoning. Oz., 40c, postpaid.

Quality Vegetable Plants

For those who do not have the facilities or do not care to grow them, we carry a complete line of well grown plants of the best varieties. These plants are double rooted, sturdy, and of excellent quality. Greenhouse grown.

Cabbage

Early Jersey Wakefield.
Copenhagen Early Market.
Danish Ballhead.

Prepaid, doz., 25c; not prepaid, 100 for \$1.25.

Peppers

Harris' Earliest.
Bull Nose.
Ruby King.

Doz., 20c, postpaid; not postpaid, 100 for \$2.00.

Cauliflower

Snowball. Doz., 30c, postpaid; not postpaid, 100 for \$2.00.

Tomato

Dwarf Stone.
Bonny Best.
Chalk's Jewel.
Red Head.

Doz., 20c, postpaid; not postpaid, 100 for \$1.25.



Cabbage Plant.

Texas Outdoor Grown Onion Plants

For those who desire an early crop, either for table or for local marketing, these plants will prove most desirable, and the fact that they are inexpensive and call for minimum labor and trouble in producing the crop has created an ever-increasing demand for them. They may be set out at the same time you would plant sets or cabbage plants. Plant in rows about 15 inches apart and 3 to 4 inches in the row.

Yellow Bermuda. The most popular of all the Bermuda varieties. It is the standard variety with the large commercial Bermuda Onion growers. It is a light straw colored Onion; makes the finest for pulling green or as matured Onions.

Crystal White Wax: Unquestionably the most attractive Onion in the world. A pure white Bermuda Onion with a most beautiful waxy appearance which makes it sell on sight in all markets.

Price, 500 for \$1.25; 1000 for \$2.25, postpaid.



Quality Flower Plants

These plants are double rooted, grown in flats. We pack them well, letting some of the dirt adhere to the roots so that they will reach you in good condition.

All plants should be unpacked immediately after arrival, the roots placed in water for a few minutes. If you cannot set them out in their permanent locations, they should be separated and heeled in the soil in some sheltered place in the garden.

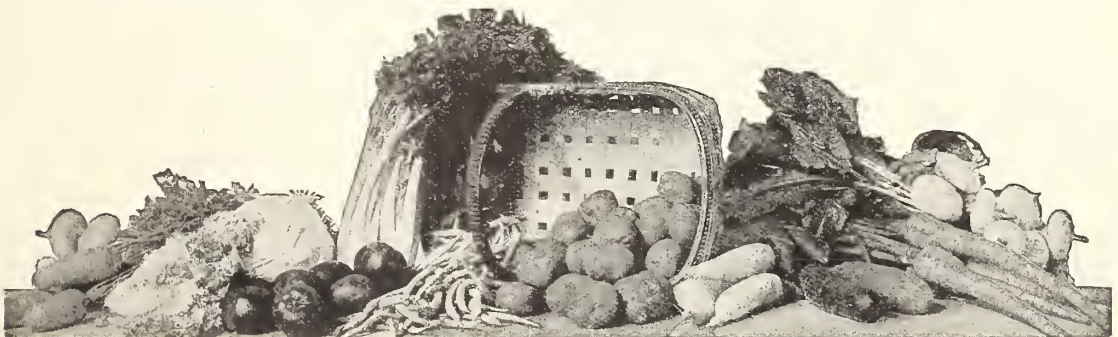
Aster. Queen of the Market and
Crego.
Petunia.

Salvia.
Zinnia.
Snapdragon.

All of the above flower plants, per dozen, 30c, postpaid. For larger quantities, write for prices.

Your Garden

This bountiful supply of fresh green vegetables can be yours if you will plant a garden. For special collection of seeds we refer you to page 21.



We specialize in the highest grade of grass seeds for lawns and golf courses. Nothing adds as much to the external attractiveness of a home as a beautiful, well kept lawn.

Sunny Lawn Seed

Contains Kentucky Blue Grass, Red Top, Perennial Rye Grass and White Clover. This mixture has made a host of friends by the results that are and have been obtained. We use only the very best of seeds obtainable, of lasting value and hardiness, mix them ourselves in the correct proportions to assure you of a beautiful and permanent lawn that will last for years. Price, 50c per lb.

Kentucky Blue Grass, June Grass One of the best grasses for permanency. For lawns or pasture, it has no superior. Does well in any soil and stands the summer heat remarkably well. As it takes some time to become established, it is usually sown in mixtures. 50c per lb.

Canadian Blue Grass Succeeds on soil too poor for Kentucky Blue Grass. For shady spots it is advisable to use, as it is harder and is better adapted to Michigan weather conditions. 50c per lb.

White Clover (Dutch). A small, low growing variety. It is largely used in lawns and pastures. It makes a small, close, compact growth covering the ground like a carpet. Its blossoms are round, white and sweet scented, with numerous leaves of bright green color. It succeeds well in Michigan and looks better when sown in mixtures. 75c per lb.

FERTILIZERS

For Lawns, Golf Courses and Gardens

V-C FAIRWAY FERTILIZER

For Lawns and Golf Courses

To have a lawn of closer, faster growing grass that resists droughts, stays greener, constantly thickens and spreads, use V. C. Fairway Fertilizer. This is the treatment now used on the lawns of country estates, polo fields and on the most famous golf courses. Fifteen times as rich as manure; costs not more than 10c for each 100 sq. ft. to be treated. Practically no odor.

FAIRWAY PRICES

10-lb. bag	.....\$1.00
25-lb. bag	..... 1.75
50-lb. bag	..... 3.00
100-lb. bag	..... 5.00



Lime

Pulverized Agricultural Limestone is not a fertilizer as it is commonly thought, but is a soil sweetener, and everyone can insure the constant fertility of his soil by using a little care and "feeding" the soil regularly with the elements needed. One of the common ailments for lack of fertility is "acid soil" and it is to correct this condition, to "sweeten" or neutralize acid soil that Pulverized Limestone is used. Lawns that are run down, where you have been unable to grow clover and where moss thrives need Pulverized Limestone. Ask us for prices.

Beautify Your Home—Use Vigoro

You can beautify your home by having a velvety green lawn, crisp, succulent vegetables, colorful flowers, luxuriant shrubbery and stately trees if you will keep in mind the fact that plants, like human beings, must be fed—and fed the right kind of plant food.



VIGORO

Specialty prepared plant food

For lawns, gardens, flowers, roses, shrubs and trees.

PRICES ON VIGORO

100-lb. bag	.....\$5.00
50-lb. bag	..... 3.00
25-lb. bag	..... 1.75
5-lb. pkg.	..... .50

F. O. B. Grand Rapids.

Grass Seed for Lawns and Golf Courses



Making a Lawn and Its Care

If your soil is not a good garden soil, you must make it so. Save the good top soil and remove the balance to a depth of at least six inches, then apply two inches of clay if the soil is sandy, replace the top soil and enough more to bring up to the grade line. Apply two inches of well-rotted stable manure (never use fresh manure) or if that is unobtainable, use pulverized poultry or sheep manure at the rate of 100 pounds to 3,000 square feet. To this should be added an equal amount of bone meal. This fertilizer thoroughly mixed with the top soil will make an ideal foundation for a lasting lawn.

SEEDING. Procure the very best seed you can get. Do not take chances on cheap seed if you want good results. Our lawn mixtures contain only the very best re-cleaned seed and are made up of the proper proportion of the several grasses to make a permanent lawn. Sow one pound to 300 square feet. Cover with one-fourth inch of screened soil and roll or firm with the back of a spade or a board.

WATERING. Keep the surface of the new seeding moist but do not water to excess. Do not expect to see your lawn green in a week as Kentucky Blue Grass requires about 18 days to germinate, other grasses somewhat less. Some

mixtures will come up in far less time, but you will generally find the bulk of such seed to be annual grasses which will not come up the second year. After the lawn is established, it is not necessary to water oftener than once a week, but then give it a thorough soaking. Frequent sprinkling tends to keep the roots near the surface and they will not have any reason to penetrate deep into the sub-soil for moisture, hence, when you have a period of hot, dry weather and cannot sprinkle, the grass plants will naturally suffer.

MOWING. As soon as the grass is long enough to cut, go over it with the mower, blades set about 1½ to 2 inches high. When the lawn is well established, they can be lowered to one inch. Never let the lawn grass go to seed as that will be too great a drain on the plants. The best time to seed is March and April or August and September.

Top dress in late fall or early spring with pure bone meal and pulverized poultry or sheep manure. Remember, a grass plant is a living thing and must have a strong constitution (good seed); proper living quarters (good soil); nourishment (proper fertilizer and moisture); and careful attention to its health (regular clipping, not too close; mulching to retain moisture by leaving the clippings occasionally if any thin spots occur).

Watch Your Lawn Brighten Up At Once!

Loma

Today you apply Loma—10 to 14 days hence your lawn is beauty bright . . . the grass a rich, healthy green . . . thick, velvety . . . rejuvenated . . .

with no more labor on your part than is called for by a mowing or watering.

No doubt you have read in The Saturday Evening Post the reports from home-owners throughout the country confirming these results from Loma.

Loma is a plant food with two most unusual and individual features—

FIRST—It is quick-acting. You apply it today and in 10 days to two weeks your lawn is brightened up, beautified, renewed, because Loma is a plant food in such form that grass, flowers and vegetables are able to use it, and benefit by it, immediately. You don't have to wait all season for results.

SECOND—It is a balanced food. Plants not only require nitrates, phosphates and potash, but they require them in the right proportions. Many years of research have resulted in bringing these foods together in Loma in a combination that produces truly astonishing growths.

In 1-lb., 5-lb., 10-lb., 25-lb., 50-lb. and 100-lb. bags at popular prices.

Soiltex

Some grasses will thrive in "sour or acid" soil, but the majority demand a sweet soil to do their best, especially the clovers. With the Soiltex outfit you can easily and accurately test your soil in a few minutes and find out how much lime is needed to correct the "sour" condition. Each outfit will make about 75 tests. Complete with color chart and lime table. 35c postpaid.



Actual Photograph—Notice the Difference.

Milorganite

The ideal turf fertilizer, will make you proud of your lawn, flowers and shrubs. Applied to your lawn in the spring it will insure dark green, luxuriant grass throughout the growing season. By the way, this practice is followed by more than 2000 expert greenkeepers to produce the wonderful turf you so admire. You can also produce better flowers and shrubs with Milorganite. Milwaukee home owners use 10,000 one hundred-pound bags of Milorganite annually. Packed in 100-lb. bags at \$3.50; 50-lb. bags at \$2.00; 25-lb. bags at \$1.25, not prepaid.

Shady Lawn Mixture

Contains Canadian Blue Grass, Red Top, Kentucky Blue Grass, and Fescue. This mixture is our own also, being mixed by ourselves especially for the shady spots. We use only the very best of seeds obtainable and as more care and attention is required we have used the hardier grasses, that will make a dense, thick growth in light soils and a very satisfactory lawn in shady places. Under trees and bare spots where there is a covering of moss or the soil seems to be out of condition, it is a sure sign of "sour soil" and lime must be used to correct this condition. 50c per lb.

Red Top A very hardy perennial grass, succeeding best on moist land. Valuable for lawn or pasture, and will produce large crops of good hay. 50c per lb.

Perennial Rye (English). A desirable grass for lawn or pasture. It forms a heavy close sod of medium fine grass and grows quickly after being cut. 25c per lb.

Creeping or Red Fescue Resists extreme drought, thrives on inferior soil, gravelly banks and exposed hills. 50c per lb.

Bent Grass One of the most valuable lawn grasses. Exceptionally good for golf courses, greens, etc., because of its short growth and deep green, fine-leaved foliage. \$1.00 per lb.

Rough Stalked Meadow (Poa Trivialis). Very closely related to the Kentucky blue grass. It is mostly used in shady places and will thrive in any good soil. 60c per lb.

FERTILIZERS

For Lawns, Golf Courses and Gardens

BLOOMMAID

For Flowers, Shrubs, Vegetables

If you want to grow larger plants that start blooming earlier and last longer, let us suggest that you use Bloommaid. Simply apply it to the soil in flower beds, pots or window boxes. It is fifteen times as rich as manure. It makes plants glow with the green of perfect health.

BLOOMMAID PRICES

1-lb. can	.....\$0.25
5 lbs.	..... .50
25-lb. bag	..... 1.75
100-lb. bag	..... 5.00



Old Gardener

Old Gardener fertilizer is a properly balanced preparation in which all the elements necessary for plant growth are made available. It has been perfected by actual practical tests and is equally valuable for lawns, gardens, shrubs, trees and flowers. Comes packed in 5-lb. bags; 10-lb. bags; 25-lb. bags; 50-lb. bags and 100-lb. bags at popular prices.



FERTILIS TABLETS

These little tablets are life savers for ferns, palms, rose bushes, plants of all varieties and vegetables. Contain elements that give new life and vitality. Wonderful for cut flowers, too. Make them last longer and keep more beautiful. Keep delighted with results. Simple directions for use with each package. Package of 50 tablets, 25c.



Ford Ammonium Sulphate

Promotes plant growth and beautifies lawns, plants, shrubs, flowers and trees. It is finely ground, does not cake and can be applied very easily by broadcasting dry by hand or it may be sprayed in solution as it dissolves very readily. Either method will insure proper fertilization. When used to eliminate weeds on the lawn, do not use lime or wood ashes. Can be procured in any quantity, and price will be quoted on application.

PLANTER'S GUIDE

In compiling this catalog we have given you cultural directions on our entire line of vegetable seeds listed with each variety, but as an additional source of information we give you the following guide arranged to help the gardener or farmer in the sowing of his seed or setting out the plants from February to October, in the latitude of Grand Rapids, Mich. For points north or south weather conditions will govern and should be taken into consideration.

Kind of vegetable	Seeds or roots required for 100 ft. of drill	One Acre	Distance for plants to stand			Depth of planting	Time of planting in the open ground
			Rows apart		Plants apart in rows		
			Horse cultivation	Hand cultivation			
Asparagus, seed....	2 ozs.	6 lbs.	30 to 36 in. ..	1 to 2 ft.	3 in.	1 in.	Early Spring
Asparagus, roots....	60 to 80.		3 to 5 ft.	12 to 24 in. ..	15 to 20 in. ..	3 to 5 in.	Early Spring
Beans, dwarf.....	1 qt.	¾ bu.	30 to 36 in. ..	18 to 24 in. ..	2 in.	1 in.	May to July
Beans, pole.....	½ pt.	½ bu.	3 to 4 ft.	3 to 4 ft.	3 to 4 ft.	1 in.	June
Beets	2 ozs.	5 or 6 lbs.	28 to 36 in. ..	12 to 18 in. ..	2 in.	1 in.	April to August
Brussels Sprouts ..	¼ oz.	2 ozs.	30 to 36 in. ..	24 to 30 in. ..	16 to 24 in. ..	½ in.	May and June
Cabbage, early.....	¼ oz.	½ lb.	30 to 36 in. ..	24 to 30 in. ..	12 to 18 in. ..	½ in.	Mar. and Apr. (Start in hotbed during Feb.)
Cabbage, late.....	¼ oz.	½ lb.	30 to 40 in. ..	24 to 36 in. ..	16 to 24 in. ..	½ in.	May and June
Carrot	1 oz.	2 lbs.	30 to 36 in. ..	18 to 24 in. ..	2 in.	½ in.	April to June
Cauliflower	¼ oz.	4 ozs.	30 to 36 in. ..	24 to 30 in. ..	18 in.	½ in.	April to June
Celery	¼ oz.	¼ lb.	3 to 6 ft.	18 to 36 in. ..	2 in.	¾ in.	May & June. (Start in hotbed or cold frame during Mar. or Apr.)
Celery cabbage	¼ oz.	½ lb.	3 ft.	3 ft.	15 in.	½ in.	Last of May
Corn, sweet.....	¼ pt.	6 qts.	36 to 42 in. ..	30 to 36 in. ..	4 to every 3 ft. ..	1 in.	May to July
Cucumber	½ oz.	2 lbs.	4 to 6 ft.	4 to 6 ft.	4 every 3 ft.	1 in.	April to July 1st
Eggplant	½ oz.	¼ lb.	30 to 36 in. ..	24 to 30 in. ..	18 in.	½ in.	Apr. & May. (Start in hotbed during Mar.)
Endive	1 oz.	2 lbs.	30 in.	18 in.	12 in.	½ in.	April [July]
Kale, or Borecole ..	1 oz.	1 lb.	30 to 36 in. ..	18 to 24 in. ..	18 in.	½ in.	Aug. to Sept. [March and April]
Kohl-rabi	½ oz.	1 lb.	30 to 36 in. ..	18 to 24 in. ..	6 in.	½ in.	March to May
Leek	1 oz.	4 lbs.	30 to 36 in. ..	14 to 20 in. ..	4 in.	½ in.	March to May
Lettuce	½ oz.	3 lbs.	30 in.	12 to 18 in. ..	6 in.	½ in.	March to Sept.
Muskmelon	½ oz.	1 lb.	6 to 8 ft.	6 to 8 ft.	4 every 4 ft.	1 in.	April to June
Watermelon	1 oz.	3 lbs.	8 to 12 ft.	8 to 12 ft.	4 every 6 ft.	1 in.	May and June
Onion, seed.....	1 oz.	4 lbs.-5 lbs.	24 to 36 in. ..	12 to 18 in. ..	2 in.	½ in.	April to May
Onion, sets.....	1 qt.		24 to 36 in. ..	12 to 18 in. ..	4 or 5 to ft.	1 in.	Autumn and Feb. to May
Parsley	¼ oz.	3 lbs.	24 to 36 in. ..	12 to 18 in. ..	3 in.	¾ in.	Sept. and early Spring
Parsnip	1 oz.	3 to 4 lbs.	30 to 36 in. ..	18 to 24 in. ..	2 in.	½ in.	April and May
Peas	1 qt.	1 bu.	3 to 4 ft.	30 to 36 in. ..	1 in.	1 in.	March to June
Pepper	½ oz.	2 ozs.	30 to 36 in. ..	18 to 24 in. ..	15 in.	½ in.	May and June. (Start early plants in hotbed Feb. to April).
Pumpkin	½ oz.	3 ozs.	8 to 12 ft.	8 to 12 ft.	4 every 6 ft.	1 in.	May to July
Radish	1 oz.	5 lbs.	24 to 36 in. ..	12 to 18 in. ..	1 in.	½ in.	March to Sept.
Rhubarb, seed.....	½ oz.		36 in.	30 to 36 in. ..	18 in.	½ to 1 in.	Early Spring
Rhubarb, roots	33 roots ..		3 to 5 ft.	3 to 5 ft.	3 ft.	2 to 3 in.	Autumn or early Spr'g
Rutabaga	1 oz.	1 lb.	30 to 36 in. ..	18 to 24 in. ..	6 in.	½ to 1 in.	May and June
Salsify	1 oz.	5 to 6 lbs.	30 to 36 in. ..	18 to 24 in. ..	2 in.	½ in.	Early Spring
Spinach	1 oz.	8 to 10 lbs.	30 to 36 in. ..	12 to 18 in. ..	2 in.	1 in.	Sept. or very e'ly Sp'g
Squash, Summer.....	½ oz.	2 to 3 lbs.	3 to 4 ft.	3 to 4 ft.	4 every 4 ft.	1 in.	April to June
Squash, Winter.....	½ oz.	3 lbs.	7 to 10 ft.	7 to 10 ft.	4 every 6 ft.	1 in.	May to July
Tomato	½ oz.	1½ ozs.	3 to 5 ft.	3 to 4 ft.	3 by 4 ft.	½ in.	May to June
Turnip	¼ oz.	1 lb.	24 to 36 in. ..	18 to 24 in. ..	2 in.	¾ in.	April and Aug.

A Few Helpful Hints

Decide early how much ground you will use and what you will plant. Plow or spade before the ground freezes, if you can. Fertilizer and manure will insure better crops. Don't cover the seed too deep. It will germinate more quickly if only a little soil is on the seed. See full cultural directions given for each variety of seeds in the foregoing pages.

Order your seeds early so that you can take advantage of the first signs of Spring as everything is planted early, except beans, wrinkled peas and vine crops. Cultivate often. Kill the weeds when they're small. A hoe is a better tool than a hose. Don't wait for bugs. Kill them or they'll ruin your crop. Get a good sprayer and use it. We handle a complete line of fertilizers and spray materials as well as sprayers and if you are in doubt what you should use, give us a chance to help you.

FLOWER SEED DEPARTMENT

We are convinced that many of the failures with flower seeds are due to lack of proper conditions, and while it would be impossible in the space at our disposal in this catalog to give explicit directions for each and every variety which we offer, we feel sure that if the general directions given below are followed, success will be the rule.

All of our flower seeds are listed by their common name in strict alphabetical order, together with the botanical name for your guidance.

Success With Flower Seeds

For all flower seeds which should be started indoors, the best plan is to sow in earthenware seed pans or boxes (about two inches deep) which should be filled to the depth of an inch with any rough material that will furnish perfect drainage. The upper inch should be nicely sifted soil, composed, if possible, of about one-third each of sand, leaf mould and light garden loam. Press firmly and evenly and water thoroughly the day before sowing. Sow the seeds thinly over the surface, cover about one-eighth of an inch and press firmly. When the seedlings are large enough to handle, they should be transplanted into similarly prepared boxes an inch apart each way, or put into small pots and kept in same until time to plant out in the open ground. At all times they should have an abundance of air, otherwise the young seedlings are liable to "damp off."

For most of the ordinary annual flowers, the simplest method is to sow directly out-of-doors when danger of frost is past in the space where they are intended to flower. The ground should be dug and raked fine on the surface, sowing the seeds evenly and thinly, covering not over four times their size, and firming the soil over them. Should they come up too thickly, as most of them are likely to do, thin out so that the plants will stand from 4 to 12 inches apart, according to the variety.

How to Sow Flower Seeds

It will prove quite an advantage to mix all small seeds with sand or dry soil and scatter broadcast. This separates the seeds and is quite an advantage in thinning out or transplanting the young plants as those that remain are undisturbed. A common mistake in sowing flower seeds, is covering too deeply. The exception to this is the Sweet Pea, which is seldom planted deep enough. As a general rule, cover small seeds only to the depth of the thickness of the seeds; always press the earth after sowing all flower seeds, else there is danger of their drying up before the roots can get firm hold of the soil. Seed of the hardier annuals may be sown where they are to grow; but as a rule, it is preferable to transplant, as the plants are generally stronger and stand the drought better. During very dry weather, and when the seedlings are first set out, they should be watered frequently.

The weeds should be kept down and the ground loosened often, so that the plants will receive the full benefit of the rains and dews, which they will not if the ground is allowed to become hard and baked.

Annuals are those flowers which bloom and die the same year; grown from seed exclusively.

Biennials bloom and die the second year from the seeding time.

Perennials grow the plant the first year but do not flower until the second year and then bloom every year.

The letter (A) following variety indicates Annuals; (B) the Biennials; (P) the Perennials.



Alyssum (A)

(SWEET ALYSSUM)

Very popular border flower. Dwarf habit, blooming until killed by frost. Fine for beds, borders and vases.

Little Gem. Erect; white. $\frac{1}{4}$ oz., 20c; pkt., 10c.

Alyssum (P)

(SWEET ALYSSUM)

Saxatile compactum (Basket of Gold). 9 inches high. Blooms in May and June, producing masses of golden flowers very early. $\frac{1}{4}$ oz., 25c; pkt., 10c.

Ageratum (A)

(FLOSSFLOWER)

One of the best Summer blooming plants. They are rapid growers; early and constant bloomers.

Mexicanum Tall. 18 inches. Beautiful, soft lavender-blue, of free branching habit. $\frac{1}{4}$ oz., 20c; pkt., 10c.

Imperial Dwarf Blue. 6 inches. A charming variety of fine, compact growth, covered with heads of feathery flowers of a deep lavender color. $\frac{1}{4}$ oz., 20c; pkt., 10c.

ANTIRRHINUM (A). See Snapdragon.

AQUILEGIA (P). See Columbine.

Asters (A)

Giant Crego. The flowers are of immense size, usually measuring from four to five inches in diameter, and borne on stems 12 inches or more in length. **Mixed, all colors. Oz., \$1.50; pkt., 10c.**

Giant Comet. This giant class is an improvement on the old and inferior Comet class, not only in bearing much larger flowers, but the petals are longer and broader. **Mixed, all colors. Oz., \$1.25; pkt., 10c.**

Queen of the Market. The best early Aster, usually in full bloom two weeks before most other sorts begin to blossom. Of graceful spreading habit. **Mixed, all colors. Oz., \$1.00; pkt., 10c.**

American Beauty. Late flowering. Plants are of branching habit, commencing to bloom in early September and lasting until destroyed by frost. Flowers are large, borne on long and stout stems from 18 to 24 inches, making them most desirable for cut flowers. **Mixed colors, ¼ oz., 60c; pkt., 10c.**

Lavender Gem. The flowers are of a true lavender shade and the petals are gracefully curled and twisted and the blooms are borne on long, firm stems. Grows about 18 inches tall. **¼ oz., 60c; pkt., 10c.**

Alpinus (Michaelmas Daisy) (P). These fill an important place in the garden, blooming throughout the autumn months up to November when other flowers are scarce. Large showy flowers, long stems. **Mixed Colors. ¼ oz., 75c; pkt., 10c.**



Queen of the Market Aster.

BACHELOR'S BUTTONS (A). See Centaurea.

BELLIS PERENNIS (P). See Double Daisy.

BLACK-EYED SUSAN (A). See Thunbergia.

BLANKET FLOWER (A). See Gaillardia.

BUTTERFLY FLOWER (A). See Schizanthus.

BURNING BUSH (A). See Kochia Childsi.

Balsam (A)

(LADY SLIPPER)

Double Camellia-Flowered Mixed. An old and favorite garden flower, producing its gorgeous masses of beautiful colored, double flowers in the greatest profusion. **1½ to 2 feet. ¼ oz., 25c; pkt., 10c.**

Calendula (A)

(POT MARIGOLD)

Orange King. The outer petals are slightly imbricated, while those in the center are curved like those of the peony. Color glowing orange. **Oz., 30c; pkt., 10c.**

The Ball. It has fine stems, immense double flower of a brilliant glisteny orange. A great favorite on the Chicago cut flower market. **Oz., \$2.00; pkt., 10c.**

California Poppy (A)

(ESCHSCHOLTZIA)

Especially valuable for growing in flower beds and masses. Sow where plants are to bloom. Bright, showy flowers and feathered foliage. Good for cut flowers.

California Golden. Large yellow flowers. **Oz., 30c; pkt., 10c.**



Calendula.

Baby's Breath (A)

(GYPSOPHILA)

Graceful plants of fairy like growth. Large flowering, pure white, of free easy growth. Much in demand for cutting and combining with other flowers for bouquets and vases. Several sowings should be made during the season to keep up the supply. **Oz., 30c; ½ oz., 20c; pkt., 10c.**



California Poppies.



Canterbury Bells.

Centaurea (A)

A very popular annual that will always charm by its simple beauty.

Cyanus (Bachelor's Buttons). $\frac{1}{4}$ oz., 20c; pkt., 10c.

Imperialis (Sweet Sultan). $\frac{1}{4}$ oz., 25c; pkt., 10c.

Celosia (A)

(COXCOMB)

Very popular annuals of easy culture, producing large, ornamental, comb-like heads like ruffled chenille. Prized for pots or Summer flower beds. Tall Coxcomb, Mixed. 18 to 24 inch. $\frac{1}{4}$ oz., 40c; pkt., 10c.

Dwarf Cristata, Mixed. $\frac{1}{4}$ oz., 40c; pkt., 10c.

PLUMOSA or PLUMED VARIETIES

These stately plants are considered among the most ornamental, and should not be omitted in any garden. They generally form pyramidal bushes branching out in candelabra shape, and the numerous massive plumes which resemble ostrich feathers, wave gracefully above the foliage.

Plumed Celosia. Grows 2½ to 3 feet. Mixed, all colors. $\frac{1}{4}$ oz., 25c; pkt., 10c.

Chinese Woolflower (Celosia Childsi). Plants grow 2 to 3 ft. high, the bloom starting early with a central head, round and globular, which often reaches the immense size of 2 ft. in circumference. Scores of branches are thrown out, each bearing a ball of scarlet wool. $\frac{1}{4}$ oz., 50c; pkt., 10c.

Canterbury Bells (B)
(CAMPANULA)

This old-fashioned flower is a favorite with all, stately and showy and of the easiest growth. For best results seed should be sown every year.

Single Mixed. $\frac{1}{4}$ oz., 20c; pkt., 10c.

Double Mixed. $\frac{1}{4}$ oz., 50c; pkt., 10c.

Calycanthemum (Cup and Saucer). 2 ft. June to August. Mixed colors. $\frac{1}{4}$ oz., 50c; pkt., 10c.

Candytuft (A)

This is one of the most prized garden annuals. Easily grown from seed and does not need transplanting. Fine for cut flowers. Mixed. Oz., 25c; pkt., 10c.

Cardinal Climber (A)

This is a very attractive, strong and rapid grower, attaining a height of 25 feet, with beautiful fern-like lacinated foliage and literally covered with a blaze of fiery cardinal-red flowers from mid-summer to frost. Pkt., 10c.

Carnations (A)

Always in demand and not hard to grow, being hardy and free flowering. It is one of the most valuable of Summer flowers.

Marguerite. Double Mixed. $\frac{1}{4}$ oz., 50c; pkt., 10c.

Castor Bean

(RICINUS) (A)

Decorative plant with fern-like foliage, giving to the garden a magnificent sub-tropical effect; even a single plant forms a pyramid of leaves.

Zanzibariensis. Leaves vary in color from light green to purplish red. $\frac{1}{4}$ lb., 50c; oz., 15c; pkt., 10c.

Calliopsis (A)

(TICKSEED)

Very graceful border plants, supplying throughout Summer an abundance of elegant, showy flowers which are greatly prized for bouquets and vases. Will thrive anywhere. 6 in. to 2 ft. Double mixed, all colors. Oz., 20c; pkt., 10c.



Centaurea.

Chinese Lantern (P)

(PHYSALIS FRANCHETTI)

Flowers yellow with dark center. Produces balloon-like husks which turn bright red when ripe and resemble Chinese lanterns. $\frac{1}{4}$ oz., 35c; pkt., 10c.

Coleus (A)

(FOLIAGE PLANTS)

Bedding plants, growing about 1 foot high. Their foliage is highly ornamental. Easy to raise from seed. Sow seed indoors. Choice Mixed. Pkt., 10c.

Columbine (P)

(AQUILEGIA)

This beautiful plant thrives in all kinds of soil; graceful foliage, flowers abundantly from early May until the last of June. Single Mixed, $\frac{1}{4}$ oz., 20c; pkt., 10c. Double Mixed, $\frac{1}{4}$ oz., 20c; pkt., 10c.



Columbine—Aquilegia.

CONVOLVULUS (A). See Morning Glory.

Cosmos (A)

This is one of the most showy and useful of our garden plants. Plants are very bushy, a compact mass. Flowers borne on long delicate stems and are similar to single dahlias. Foliage very finely cut. 4 to 6 ft.

EARLY EXPRESS PINK. A new variety and the earliest known, coming into bloom in from 45 to 50 days from the time the seed is sown. The plants grow about $2\frac{1}{2}$ to 3 feet high and are covered with bright pink flowers. $\frac{1}{4}$ oz., 75c; pkt., 10c.

Early Flowering Mammoth, Mixed. Oz., 40c; pkt., 10c.

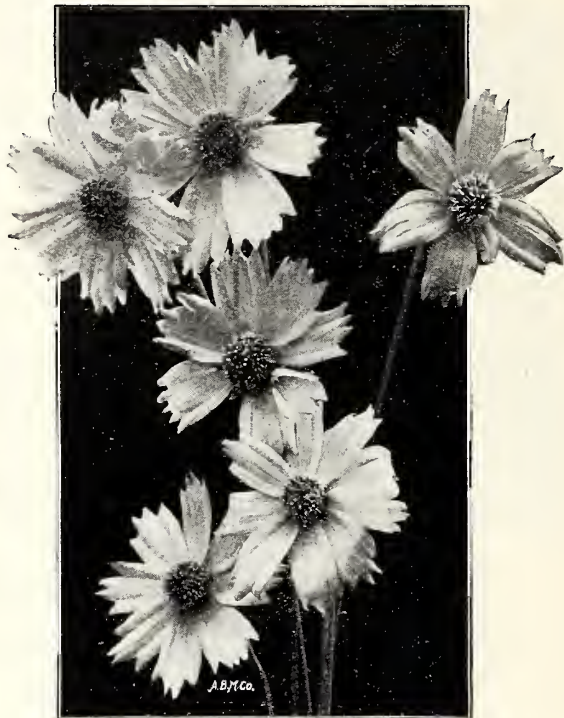
Giant Mixed. Oz., 25c; pkt., 10c.

COXCOMB. See Celosia.

Cypress Vine (A)

For trailing upon a light ornamental trellis the Cypress Vine cannot be excelled. It has a profusion of scarlet or white star-shaped blossoms, and finely cut foliage. Mixed. Oz., 30c; pkt., 10c.

Daisy, Chrysanthemum Leucanthemum. See Shasta Daisy.



Coreopsis.

Coreopsis (P)

This is one of the finest of hardy plants, with large, showy, bright yellow flowers produced in the greatest abundance from June till frost. As cut flowers they stand near the head among hardy plants. Oz., 30c; pkt., 10c.



Early Flowering Mammoth Cosmos.

Double Daisy (P)

(BELLIS PERENNIS)

A favorite low growing spring flowering plant. Loves a shady place and rich soil. 6-8 in. Double choice mixture. $\frac{1}{4}$ oz., 75c; pkt., 10c.

Delphinium (P)

(PERENNIAL LARKSPUR)

Increasingly this fine flower is coming into favor. It is hardy, grows easily, has a long period of bloom and gives to the garden one of its stateliest plants, which bear tall spikes of exquisite blue flowers.

Formosum. 3 ft. Dark blue. $\frac{1}{4}$ oz., \$1.00; pkt., 10c.

Perennial Mixed. $\frac{1}{4}$ oz., 75c; pkt., 10c.

FOR ANNUAL VARIETIES—See LARKSPUR.

DIGITALIS (B). See Foxglove.

Forget-Me-Not (B)

(MYOSOTIS)

They are considered among the best Spring flowers. They prefer moist, cool soil, and will bloom freely in Fall and early Spring.

Alpestris. Deep blue. $\frac{1}{4}$ oz., 25c; pkt., 10c.

Four O'clock (A)

(MIRABILIS)

This is another good old-fashioned flower of bushy habit, bearing hundreds of flowers during the season, of white, yellow, crimson and violet. Very charming with its glossy foliage very closely set and dotted all over in the afternoon with a multitude of fairy flowers.

Marvel of Peru. Mixed colors. $\frac{1}{4}$ lb., 50c; oz., 20c; pkt., 10c.

FOLIAGE PLANTS (A). See Coleus.

Foxglove (B)

(DIGITALIS)

Bearing long spikes of beautifully colored flowers; fine for planting in hardy borders or among shrubbery. Mixed. $\frac{1}{4}$ oz., 30c; pkt., 10c.



Gaillardia.



Delphinium—Larkspur.

EVERLASTING FLOWERS (A). See Strawflowers.

FLOSS FLOWER (A). See Ageratum.

Gaillardia (A)

(BLANKET FLOWER)

They will produce from early Spring until late Fall a continuous profusion of brilliantly colored flowers, red and yellow predominating. Of easy culture, sow where they are to remain.

Picta Lorenziana. Double flowers, mixed colors. Oz., 30c; pkt., 10c.

Gaillardia (P)

(BLANKET FLOWER)

Bloom from June to October. Their long flowering period, long stems and bright colors make these one of the most valuable perennials, being easily grown in beds and borders.

Grandiflora. Mixed, single. Oz., 50c; pkt., 10c.



Forget-Me-Not.

Choice Gladiolus Bulbs

We give you here just a few varieties of Gladiolus Bulbs, but if you wish any that are not listed, give us the name and we will quote you price as our stock is large and we cannot give here the name and description of every variety.

Alice Tiplady. Beautiful orange-saffron. Each, 7c; doz., 75c; per 100, \$5.00.

Anna Eberius. Deep rhodamine purple, throat deeper purple; large flowers on tall spikes. Each, 10c; doz., 85c; per 100, \$6.00.

Chateau Thierry. Bright scarlet-red with carmine blotch on yellow ground on lower petals; large, wide open flowers of great attraction. Each, 10c; doz., 85c; per 100, \$6.00.

Crimson Glow. Very large deep scarlet-red, tall, strong spikes. One of the best reds. Each, 10c; doz., 85c; per 100, \$6.00.

Evelyn Kirtland. Beautiful rose-pink, darker at the edges with brilliant blotches on lower petals. Each, 10c; doz., 90c; per 100, \$6.00.

Glory of Kenemerland. Beautiful rose color with purple blotch on yellow ground, a lovely color combination. Each, 10c; doz., 90c; per 100, \$6.00.

Halley. A very early salmon-pink, very popular. Each, 7c; doz., 75c; per 100, \$5.00.

Herada. Large, pure mauve flowers, deeper in throat, a great favorite. Each, 10c; doz., 85c; per 100, \$6.00.

Le Marechal Foch. The favorite pale pink variety. Flowers are extra large and very early. Each, 5c; doz., 60c; per 100, \$4.00.



Mrs. Dr. Norton.



Schwaben.

Mrs. Dr. Norton. Silvery white blooms with pink edges, throat cream-yellow dotted Tyrian rose. A beautiful color combination. Each, 10c; doz., \$1.00; per 100, \$7.00.

Mrs. Francis King. Brilliant light red, large flowers on extra long spikes; very popular. Each, 5c; doz., 60c; per 100, \$4.00.

Mrs. Frank Pendleton. Salmon-pink with rich carmine-red blotch in throat; a great favorite. Each, 10c; doz., 85c; per 100, \$6.00.

Mrs. Watt. Beautiful clear wine-red. Each, 10c; doz., \$1.00; per 100, \$7.00.

Panama. Beautiful deep pink, large flowers; one of the best clear pinks. Each, 7c; doz., 75c; per 100, \$5.00.

Peace. Large white flowers with pale violet markings on the lower petals; tall, graceful spikes. Each, 7c; doz., 75c; per 100, \$5.00.

Prince of Wales. Beautiful light orange flowers of good size. Very early. Each, 7c; doz., 75c; per 100, \$5.00.

Rose Ash. Corinthian red shading to ashes of roses color on the outer edges; lower petals light yellow speckled with ruby. A very beautiful show variety. Each, 10c; doz., \$1.00; per 100, \$7.00.

Schwaben. Clear canary-yellow shading to soft sulphur; small brownish red spot in throat. An old timer but still a favorite. Each, 7c; doz., 75c; per 100, \$5.00.

War. Deep brilliant blood-red, large flowers. A great favorite among the large reds. Each, 10c; doz., \$1.00; per 100, \$7.00.

Wilbrinck. Pale pink, lower petals have purplish stripes on a yellowish ground, very early. Each, 5c; doz., 60c; per 100, \$4.00.

Standard Mixed. This mixture contains many beautiful varieties of different shades and markings. Each, 5c; doz., 60c; per 100, \$3.50.

Gourds (A)

Interesting quick growing vines, excellent for covering arbors; ornamental foliage and fruits of odd design. Mixed, all varieties. Oz., 25c; pkt., 10c.

Heliotrope (A)

A favorite on account of its delightful fragrance and duration of bloom. Excellent for bedding. Graceful in habit of growth and valuable for cutting. 2 ft. Finest Mixture. $\frac{1}{4}$ oz., 50c; pkt., 10c.

Hibiscus (P)
(MARSHMALLOW)

Showy ornamental plants for mixed beds or shrubbery borders having large sized, beautifully colored flowers, blooms the first year if sown early. Sow seed $\frac{1}{2}$ inch deep and transplant to 2 ft. apart. 3 ft. Mixed colors. $\frac{1}{4}$ oz., 50c; pkt., 10c.

Hollyhocks (P)

Make a fine row in the garden and an excellent background to cover a high wall or fence. 6 to 8 ft.

Single Mixed. Large single flowers, exhibiting every shade known in Hollyhocks. $\frac{1}{4}$ oz., 25c; pkt., 10c.

Double Mixed. Double and semi-double. $\frac{1}{4}$ oz., 40c; pkt., 10c.



Kochia Childsi.

Larkspur (A)

These handsome flowers are very effective in borders and planted amongst shrubs. The graceful spikes of blooms are much valued for vases. They continue long in bloom.

Double Mixed, all colors. Oz., 40c; pkt., 10c.

Giant Hyacinth-Flowered. Mixed. 3 ft. Derives its name from the striking resemblance of the flowers to the Double Hyacinth. Delicate colors. Oz., 50c; pkt., 10c.

FOR PERENNIAL VARIETIES, see DELPHINIUM.

Lobelia (A)
(COMPACTA)

This charming class forms compact little bushes about six inches high and are fairly sheeted with bloom throughout the season. Very pretty and highly desirable for edgings, ribbon bedding and garden decoration as well as for pot culture. Mixed colors. $\frac{1}{4}$ oz., 30c; pkt., 10c.



Double Hollyhocks.

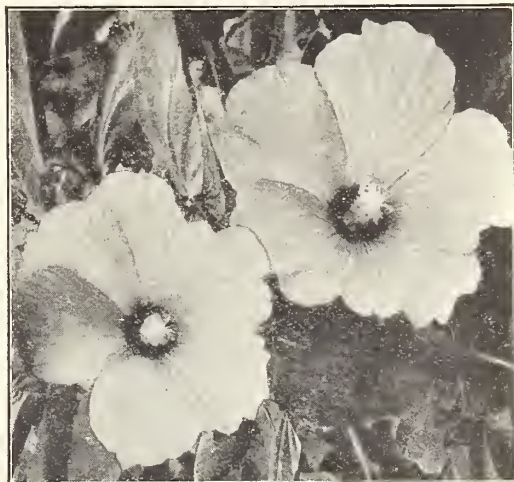
Job's Tears (A)
(COIX LACHRYMAE)

An ornamental grass growing 2 to 4 feet high, with curious seeds which may be used for beads. Oz., 10c; $\frac{1}{4}$ lb., 30c; 1 lb., \$1.00, postpaid.

LADY SLIPPER. See Balsam.

Kochia Childsi (A)
(BURNING BUSH)

It resembles a close clipped ornamental evergreen growing about 2½ feet high. The globe-shaped pyramidal bushes are close and compact and of a pleasing light green color. The plant may be grown singly or in the form of a hedge or background. In early Autumn the whole bush becomes carmine or blood-red. Flowers small and numerous, but not conspicuous. Oz., 20c; pkt., 10c.



Hibiscus.

Lupinus (P)

Attractive in the garden but most desirable for cut flowers. Easily and quickly grown in rather poor soil. Do not transplant. Water well during hot weather. Mixed. Oz., 40c; pkt., 10c.

MARSHMALLOW. See Hibiscus.

Marigold (A)
(TAGETES)

In late Summer when many bedding plants are past their prime, Marigolds afford a wealth of color that is simply invaluable. The African varieties produce large self-colored blossoms on tall plants; the French are smaller, but the colors and markings are very interesting, some of the varieties being elegantly striped and spotted.

Double Tall African. $\frac{1}{4}$ oz., 20c; pkt., 10c.

Double Dwarf French. $\frac{1}{4}$ oz., 20c; pkt., 10c.

Mignonette (A)

No garden is complete without this fragrant plant of unassuming mien. One of the principal uses is for cutting purposes and combining in bouquets with other more pretentious blossoms without its delicate odor. Grows 6 to 12 inches high.

Machet. The best for all purposes. Of dwarf habit, with very large red flowers and handsome foliage. $\frac{1}{4}$ oz., 15c; pkt., 10c.

MIRABILIS (A). See Four O'clock.

Morning Glory (A)

(CONVOLVULUS)

Deservedly very popular as they are one of the most free flowering and rapid growing plants in cultivation; the beauty and delicacy of their brilliant flowers are unsurpassed. Soaking the seed in warm water for an hour or two hastens germination.

Common, Mixed. Oz., 20c; pkt., 10c.

Japanese, Mixed. Oz., 20c; pkt., 10c.

Mourning Bride (A)

(SCABIOSA)

This is an old favorite and of late years has been greatly improved. The flowers are borne on long wiry stems in many beautiful colors. An exceptional garden plant and indispensable for cutting. Sow out doors in May. Keep the seed pods clipped and the plants will bloom much longer. 12 to 18 in. Grandiflora Mixed. Our latest special mixture and we are sure the delicate soft colors will be admired by all our friends. $\frac{1}{4}$ oz., 20c; pkt., 10c.

MYOSOTIS (B). See Forget-Me-Not.



Mourning Bride.

Nasturtiums (A)

For ease of culture, duration of bloom, brilliancy of coloring and general excellence, nothing excels them. All they need is a moderately good soil, in a well-drained sunny position, and within a few weeks from the time they are sown until hard frost comes there is an endless profusion of blossoms. The varieties offered were selected from a number of sorts as being the best. Sow seed 2 inches deep and thin plants to 8 inches apart for dwarf varieties and 16 to 20 inches apart for tall or climbing varieties.

Dwarf, Mixed. Oz., 15c; pkt., 10c.

Tall, Mixed. Oz., 15c; pkt., 10c.



Dwarf Mixed Nasturtiums.

Nicotiana (A)

(SWEET SCENTED TOBACCO PLANT)

One of the easiest annuals to raise and one of the most effective. The blossom is very much like the petunia, but with a longer tube. The flowers open toward evening and emit a powerful perfume and commence to bloom a few weeks from sowing. The plants are of branching, bushy habit, carrying their flowers in clusters.

Affinis Hybrids. Mixed colors. $\frac{1}{4}$ oz., 20c; pkt., 10c.

PHYSALIS FRANCHETTI (P). See Chinese Lantern.

Pyrethrum (P)

(PAINTED DAISY)

One of the most valuable of our early Summer flowers. Charming colors and wonderful lasting properties as a cut flower. Flowers in May and June and frequently in August and September; in all shades of rose and pink. Height 1 to 2 feet.

Roseum. Single mixed. $\frac{1}{4}$ oz., 75c; pkt., 10c.



Triumph of the Giants.

Petunias (A)

For freedom of bloom, variety of color and effectiveness these have no equal. If only a little care is bestowed upon them, they will produce their handsome, sweet-scented flowers in their delicate and gorgeous colors throughout the whole Summer and bloom profusely until killed by hard frosts. To facilitate sowing, the seed is mixed with sand or fine dry earth. Be sure the soil is finely pulverized for at least an inch on top of the ground. Scatter the mixture of seed and sand, barely pressing it into the moist soil with a small smooth board. It is an advantage to sow seed early in shallow boxes in the house, hotbed or cold frame, for window or porch boxes, vases and baskets, also for early flowering in the garden. Set the plants 12 to 18 inches apart. The Petunia loves a rich soil and thrives best in a sunny location. Pinch back freely. This causes the plants to branch out and spread, shading the ground, thereby helping to conserve the moisture. Keep the faded flowers clipped.

Single Giant Flowering Varieties

The flowers of this strain average five to seven inches across and are wonderful.

Giants of California Mixed. The flowers are very large and the colors embrace every conceivable shade of crimson, white, violet, lavender, etc. Pkt., 350 seeds, 25c.

Triumph of the Giants. The finest strain of single large-flowering Petunias; the flowers often measure seven inches across; some of its colors cannot be found in any other mixture and nearly all the flowers are veined in contrasting colors. Pkt., 250 seeds, 35c.

Double Large Flowering Varieties

Mixture of Double Petunias. This is a mixture of the best large flowering and fringed double Petunias. Seed is saved from plants grown in pots, carefully pollenized and will produce grand flowers. Of course, every one knows only a certain percentage of double flowers may be expected from seed, but our mixture will produce from 20 to 30 per cent of doubles, while the remainder will be choice, large single flowers. The weaker seedlings should be carefully saved, as those invariably produce the finest double flowers. Pkt., 200 seeds, 50c.

Best Mixture Large Flowering Single Petunias. This mixture is made by ourselves and includes, besides the Giant Ruffled, all the colors of the large flowering and fringed sorts, and the unsurpassed Superbissima varieties, with their delicately veined throats in various colors, and their truly mammoth flowers. We are positive no other Petunia mixture can produce flowers with as wide a range of colors as ours. Pkt., 300 seeds, 25c.

Special Mixture of Dwarf Small Flowering Varieties includes all the varieties listed and many others and will be a revelation to those who plant a packet in furnishing an unending supply of flowers in a most bewildering combination of colors as long as the Summer lasts. $\frac{1}{4}$ oz., 40c; pkt., 10c.

Rosy Morn. The plants are bushy and compact, flowers of medium size, produced in great abundance the entire Summer and Fall; are of a most pleasing clear pink, contrasted by a broad white throat. A splendid sort for porch boxes, pots and beds. Oz., \$4.00; 1-8 oz., 75c; pkt., 25c.

Royal Purple. Flowers of extraordinary size, averaging 3 to 4 inches across. Superb single flowering of a rich velvety color, so much in demand for hanging baskets, porch boxes, etc. Pkt., 150 seeds, 20c.



Giant Ruffled Petunias.

Pinks (A)

(DIANTHUS)

Single. The flowers are extraordinarily large, of handsome form, and embrace the most beautiful colors, ranging from white to the most delicate pink and deep crimson. $\frac{1}{4}$ oz., 25c; pkt., 10c.

Double. Selection of the best double Pinks in cultivation. Flowers ranging in color through all the brightest and most brilliant shades. $\frac{1}{4}$ oz., 25c; pkt., 10c.

Phlox (A)

The annual Phloxes are dazzling in effect, particularly so when sown in masses or ribbon beds of contrasting colors. Few flowers are so easy to grow from seed, so pretty and compact in habit, so quick to bloom, or give such a brilliant display of color for so little cost or care. For pot culture and as an undergrowth for tall, bare-stemmed plants, they are also invaluable. The first sowing should be made as soon as the frost is out of the ground in Spring, later ones in May, either where the plants are to bloom, or in a seed-bed, as the Phlox transplant readily. In transplanting, set the taller kinds about a foot apart. Cutting away the old flowers makes the plants more bushy and compact, and lengthens their blooming time.

Phlox Drummondii. Unsurpassed for variety of colors. Flowers are smaller than those of the large flowering varieties. Mixed. $\frac{1}{4}$ oz., 30c; pkt., 10c.

Phlox (P)

Decussata. Hardy herbaceous perennial and quite distinct from the Phlox Drummondii offered above, which is an annual. For best results seed should be sown in the Autumn. Finest Mixed. $\frac{1}{4}$ oz., 75c; pkt., 10c.



Oriental Poppies.

Poppies (A)

Should be sown as early in the Spring as possible, where they are to remain, as they will not stand transplanting. Sow very thinly, as they must not stand nearer than 5 or 6 inches apart if you wish best results.

Ryburgh Hybrid. The flowers are double and resemble a giant carnation, with flat petals overlapping like a double begonia. The colors embrace all shades of pink, salmon, orange, etc.; all self colors. Mixed. $\frac{1}{4}$ oz., 40c; pkt., 10c.

Double Poppies. Special mixture as to variety as well as colors. Oz., 25c; pkt., 10c.

Shirley. These have beautiful satiny flowers of various colors, all with white centers, which makes the plants very attractive. Foliage is hairy and finely cut. Beautiful shades in delicate tints of rose, apricot, salmon-pink and blush to glowing crimson with a sprinkling of blues. Oz., 50c; pkt., 10c.

Single Poppy. Special mixture. Varied assortment and colors. Oz., 25c; pkt., 10c.

Oriental Poppies (P)

These should be sown in early Spring in the open ground as soon as it is fit to work. The plants disappear during July and August appearing again as soon as the weather gets cool. It is well to mark the place with a stick so the roots will not be disturbed during the resting period. When the Fall growth starts they should be transplanted to their permanent flowering quarters. For permanent beds they are unequalled. Flowers of immense size, 6 inches and over, of many novel colors.

Hybrids, Choice Mixed. $\frac{1}{4}$ oz., 40c; pkt., 10c.



Phlox Drummondii.

Pansies (B)

They like a cool, moist soil and protection from the wind as well as the noon-day sun. Seed should be sown in the house and transplanted when danger of frost is over. For large flowers, early in the Spring, the seed should be sown in August or September and the plants protected with a cold frame during the Winter. Seed may also be sown out-of-doors in the Spring for late Summer and Fall flowers.

Non Plus Ultra, Giant Mixture. This includes the most delightful variations in shades and markings, and is easily the most beautiful pansy grown. Very large in size, the blossoms measuring more than three inches across. A favorite with the pansy fancier. $\frac{1}{8}$ oz., \$1.00; $\frac{1}{4}$ oz., \$1.75; 1 oz., \$6.00.

Radiolight. A new giant mixture of light colored Pansies, composed of clear self colors, containing also flowers with curled petals. The flowers are exceptionally large in size and are easily recognized as a superior mixture, bound to win favor with the Pansy fancier. $\frac{1}{8}$ oz., \$1.00; $\frac{1}{4}$ oz., \$1.75; 1 oz., \$6.00.

Giant Mixture. Flowers very large, and great diversity of colors. This mixture contains all the good ones. Oz., \$5.00; pkt., 10c.

Good Mixture. Not so many colors as the Giant Mixture, but flowers large and good assortment of colors. Oz., \$2.00; pkt., 10c.



Pansies.



Portulaca—Rose Moss.

Portulaca (A) (ROSE MOSS)

This plant will grow and bloom profusely in dry hot situations, where almost any other plant would soon die. Easily transplanted. In sowing mix the seed with dry sand to insure an even distribution. Sow in May when the ground is thoroughly warmed, and soon the loveliest of floral carpets will appear. Double Best Mixture. $\frac{1}{4}$ oz., 75c; pkt., 10c. Single Mixed. $\frac{1}{4}$ oz., 20c; pkt., 10c.

POT MARIGOLD—See Calendula.

Red Hot Poker (P) (TRITOMA)

Very handsome and showy border plant. Flowers borne in compact form on stout, 3- and 4-foot stems, having the appearance at a distance of orange and red colored spear heads. Early flowering. $\frac{1}{4}$ oz., 50c; pkt., 10c.



Red Hot Poker.

Salpiglossis (A)

Undoubtedly one of the most attractive annuals and should be in every garden. The blossoms are tube shaped, much like a Petunia but rivaling the latter in the beautiful colors displayed. Nearly every flower is veined with a glint of gold, and it is the only flower to our knowledge possessing this odd characteristic. The flowers are large and last well in water, really better than when on the plants.

Gloxiniaeflora Mixed. $\frac{1}{4}$ oz., 40c; pkt., 10c.

Salvia (A)

(FLOWERING SAGE)

A hedge or bed of Salvias is a blaze of color during late Summer and Fall, bloom in spikes and continuing to bloom until killed by hard frosts. Seed should be started indoors, sow about $\frac{1}{4}$ inch deep; transplant when the soil has become well warmed, about 12 to 18 inches apart.

Splendens. 2 $\frac{1}{2}$ ft. The well known variety, fiery scarlet. Oz., \$2.00; $\frac{1}{4}$ oz., 60c; pkt., 10c.

Fireball. 1 $\frac{1}{2}$ ft. The bushy plant is covered with a great number of flower spikes of the most fiery scarlet. The plants branch freely, the side shoots often producing 4 to 6 spikes. Oz., \$3.00; pkt., 15c.

Scarlet Runner (A)

A very rapid grower, bearing large sprays of bright scarlet pea-like flowers from early Summer to late Fall. Pkt., 10c.

SCABIOSA (A). See Mourning Bride.



Shasta Daisies.

Shasta Daisy (P)

(CHRYSANTHEMUM LEUCANTHEMUM)

Grows very bushy, bearing all Summer a profusion of immense white flowers on long stems. $\frac{1}{4}$ oz., 75c; pkt., 10c.

Schizanthus (A) (BUTTERFLY FLOWER)

Low growing, delicately branching and covered with butterfly-like flowers. Sow out-of-doors in May. Pinch back the main stem when 6 inches high. It seems to develop best in cool seasons, so make successive sowings through Spring and Summer. Supreme Mixture. All colors. $\frac{1}{4}$ oz., 25c; pkt., 10c.

Snapdragon (A) (ANTIRRHINUM)

For gorgeous coloring few flowers can match Snapdragons. The flowers are of very large size, very fragrant, and are produced on immense long spikes, which render them extremely well adapted for cut flowers.

Tall Mixed. $\frac{1}{4}$ oz., 25c; pkt., 10c.

Dwarf Mixed. $\frac{1}{4}$ oz., 25c; pkt., 10c.



Snapdragon.

Stocks (A)

They last a long time in bloom, are beautiful, fragrant and satisfactory. May be sown in the open ground, or in the hotbed or cold frame, but if transplanted let this be done when the plants are small. Transplant 1 foot apart.

Ten Weeks Large Flowering. The favorite sort for bedding. Grows about 1 ft. high. Mixed, all colors, $\frac{1}{4}$ oz., 50c; pkt., 10c.

Giant Perfection or Cut-and-Come-Again. Useful for outdoor bedding as well as for pots or cut flowers. They throw out numerous side branches, all bearing double, fragrant flowers. Height 18 in. Mixed. $\frac{1}{4}$ oz., \$1.00; pkt., 10c.

Sunflower (A) (HELIANTHUS)

Of easiest culture. Suitable for backgrounds, screens, and to plant among shrubbery. It blooms from June till frost. 3 to 6 feet.

Double Chrysanthemum-Flowered. Large, golden yellow flowers, resembling a chrysanthemum. Oz., 30c; pkt., 10c.

SUNFLOWER, Mammoth Russian. See page 47.



Sweet William.

Strawflower (A) (HELICHRYSUM)

An ornament to the garden when growing, and are prized everywhere for the Winter decoration of vases, and for durable bouquets. Flowers intended for drying should be gathered when partially unfolded and suspended with their heads downward in a cool place. Mixed, all colors. Oz., 50c; pkt., 10c.

SWEET ALYSSUM. See Alyssum.

Sweet William (P)

This sturdy, reliable old-fashioned favorite is still a source of delight in the garden of today. Seed may be sown at any time from Spring to midsummer. The charm of the great trusses of lovely color seems to be lost when it is planted as a mixture in masses. It is best if you give slight protection during the Winter. It likes warm, rich soil. 2 ft.

Single, Finest Mixed. A very choice assortment of all the best single flowered varieties. Oz., 30c; pkt., 10c.

Double Mixed. This mixture you will find of superior quality, containing all colors and shades. $\frac{1}{4}$ oz., 20c; pkt., 10c.



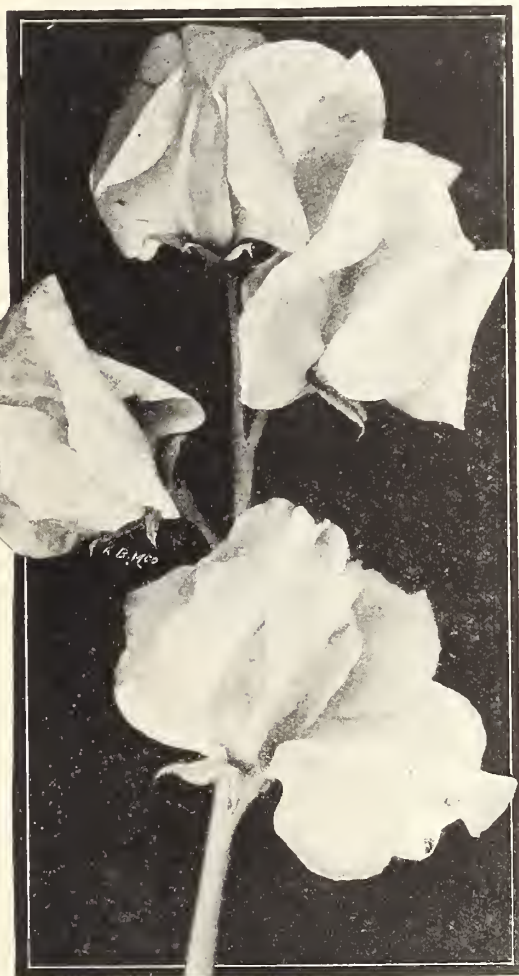
Strawflowers.

Beautiful Sweet Peas

To grow Sweet Peas successfully it is necessary to plant early and give plenty of moisture. They should go in the ground as soon as the ground can be worked and should be planted six inches deep, being covered at first with only two inches of soil, the trench being filled as the plants grow. It is best to soak the seeds for several hours before they are planted. If this plan of planting early is followed, and if the Sweet Peas are kept mulched with peat moss, lawn clippings or else watered abundantly, they will certainly give a fine crop of lovely flowers held in admiration by every flower lover. The mixtures we give you below will give you color in profusion and well worth your consideration.

Superb Spencer Mixed

A great many people prefer to grow Sweet Peas in the mixed colors. Our superb Spencer Mixture is made up of all the best varieties obtainable. The greatest care is taken to insure a well balanced range of colors and worthy of a place in any garden. Pkt., 10c; oz., 20c; ¼ lb., 50c; 1 lb., \$1.50, postpaid.



Mary Pickford Sweet Pea.

Perennial Sweet Pea (LATHYRUS LATIFOLIUS)

Very decorative climbing vines of the pea family for growing on fences, trellis, etc., as floral screens and for cutting. Blooms all summer. Colors, pale pink, bright rosy crimson and large flowering white. All mixed. Oz., \$1.00; pkt., 10c.

Grandiflora Mixed

This mixture is made up of the choicest sorts and while not as large as the Spencer type, bloom more profusely. This mixture is one of the best. Pkt., 10c; oz., 15c; ¼ lb., 40c; 1 lb., \$1.00, postpaid.

We offer the following beautiful varieties of orchid flowering or Spencer Sweet Peas, in several distinct colors, and should be planted where a distinct color combination is to be brought out.

Miss California. The color is a distinct shade of salmon-pink, and the effect is extremely beautiful, whether under natural or artificial light. The vines are of vigorous growth and bear profusely many four-flowered sprays of exquisitely waved or fluted form. The stems are long and stout. In the garden, Miss California is most attractive as the handsome flowers stand out from the heavy foliage, which forms a most attractive background. Oz., 35c; pkt., 10c.

Mary Pickford. A beautiful dainty cream-pink with just the faintest suffusion of salmon, making the color combination hard to surpass. The flowers are perfectly formed with both standards and wings decidedly waved. Mary Pickford is a sturdy grower, producing an abundance of large four-flowered sprays on long, stout stems. This sweet pea was a large seller last season, and is a decided favorite both with the commercial grower and in the home garden. Oz., 35c; pkt., 10c.

Youth. Clear waxy white, with a well defined clear pink edging. This is undoubtedly the best of all Picotée sweet peas. Enormous flowers which are wonderfully fragrant. Oz., 35c; pkt., 10c.

Doreen. Bright rose-carmine. A huge flower much larger and brighter than any other carmine variety. Very popular with exhibitors on account of its large size. Bears a profusion of four blossom sprays. Oz., 35c; pkt., 10c.

Campfire. This is the brightest, pure flame scarlet we have ever offered. It leads all other varieties in this class. The blossoms will stand the hottest sunshine without burning. Oz., 35c; pkt., 10c.

Crimson King. Pure deep crimson, the most pronounced deep red of all sweet peas. The strong, straight stems, 16 to 18 inches long stand out well from the foliage and invariably carry more four-flowered sprays than three. Oz., 35c; pkt., 10c.

Austin Frederick Improved. The finest pure lavender sweet pea yet introduced. The flowers are large, wonderfully fragrant. Oz., 35c; pkt., 10c.

Hebe. Large flowers, old rose with pink shading, making a very wonderful color combination. The stems are long and the flowers stand out from the foliage in a pleasing array. Oz., 35c; pkt., 10c.

Tangerine Improved. A salmon-orange sweet pea, deep colored, almost approaching the color of the tangerine orange. Fragrant. Oz., 35c; pkt., 10c.

TAGETES. See Marigold.



Giant-Flowered Zinnias.

Thunbergia (A)

Alata. A lovely trailing plant with large, showy flowers. It will trail over the ground, forming a dense mat of foliage and flowers. Colors range through all shades of yellow, orange, buff, to pure white, mostly with jet-black centers or eyes, which are very effective. Sometimes called "Black-eyed Susan." All colors mixed. $\frac{1}{4}$ oz., 40c; pkt., 10c.

TICKSEED. See Calliopsis.

Verbena (A)

One of our trustworthy garden companions. Of trailing habit. The foliage makes a perfect carpet and a fine background for the broad, flat flower heads of many brilliant colors. Sow in boxes in the house and transplant when the seedlings are an inch high, and set outside after danger of frost is past in a warm, sunny spot.

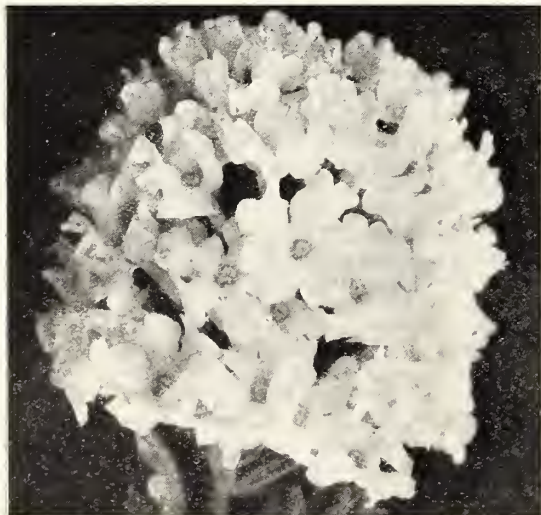
Mammoth Purple. $\frac{1}{4}$ oz., 40c; pkt., 10c.

Mammoth Mixed. Producing in handsome umbels flowers of large size in beautiful shades of white, rose, scarlet, blue and purple. $\frac{1}{4}$ oz., 30c; pkt., 10c.

Wild Cucumber (A)

(ECHINOCYSTIS LOBATA)

This is the quickest growing climber in our list. It is thickly dotted over with pretty, white, fragrant flowers, followed by an abundance of ornamental and prickly seed pods. $\frac{1}{4}$ lb., 75c; oz., 25c; pkt., 10c.



Verbena.

Zinnias (A)

Splendid hardy annuals making a brilliant profusion of color and succeeding well in any soil. They will retain their beauty for several weeks and bloom until frost.

Lilliput Double, Mixed. 12 in. The plants form handsome little bushes and fairly bristle with tiny, short-stemmed, very double flowers hardly exceeding a daisy flower in size. They are pretty plants. $\frac{1}{4}$ oz., 40c; pkt., 10c.

Giant Double Quilled Achievement. The petals are partially tubular or quilled, in appearance resembling the cactus dahlia. On the reverse side the petals are light or dark lilac. The plants are of strong, robust growth, and produce an abundance of very large double flowers often 5 inches in diameter. Choice Mixed. $\frac{1}{4}$ oz., 50c; pkt., 10c.

Colossal or Giant Flowered. The flowers are gigantic in size; thickly set with velvety petals. The plants are vigorous, branching freely and are fine for cutting. Mixed colors. $\frac{1}{4}$ oz., 30c; pkt., 10c.

Giant Dahlia Flowered. In formation the broad petals are closely imbricated, sometimes seeming almost to be piled one upon the other. The flowers often measure 4 inches in depth and 6 to 8 inches in diameter. In general appearance the flowers compare with the Show Dahlias. Mixed colors. $\frac{1}{4}$ oz., 50c; pkt., 10c.

Double Mammoth Mixed. All the varieties listed here and others in one mixture. $\frac{1}{4}$ oz., 40c; pkt., 10c.

Vinca (A)

(PERIWINKLE)

Ornamental free-blooming plants and one of the most satisfactory flowering bedding plants we have. It is best to start the seed early indoors or in a hotbed, but they begin blooming in August from seed sown out-of-doors in May, or as soon as the ground is warm, continuing until frost; or they may be potted and kept in bloom through the Winter; a fine cut flower, every bud opening when placed in water. 2 feet.

Rosea. Rose, dark eye. $\frac{1}{4}$ oz., 30c; pkt., 10c.

Wallflower (P)

The Wallflower should win favor for outdoor bedding and pot culture. The oriental coloring is very effective. In the northern states it should be wintered in cold frames. Grows 2 ft.

Single Mixed. Oz., 20c; pkt., 10c.

FIELD SEEDS



A Big Yield of Grimm Alfalfa.

Alfalfa

The acreage seeded to Alfalfa in Michigan is increasing every year. All of our seed is northern grown, therefore, it is best adapted to our climate.

Every ton of Alfalfa hay removes from the soil eleven pounds of phosphoric acid, which cannot be replaced by plowing under cover crops or manure. And unless Acid Phosphate, ground phosphate rock, or bone meal is applied, the soil soon becomes unbalanced, and will not produce good yields of grain. Even if the entire crop of either Alfalfa or Sweet Clover is plowed under, it only puts back the amount of phosphoric acid it has taken from the soil. At least two hundred (200) pounds of 16 per cent Acid Phosphate per acre should be sown with the seed, and the same amount should be applied as a top dressing every year thereafter so long as the field remains in Alfalfa.

GRIMM ALFALFA was brought to the United States by a Mr. Grimm, who brought with him from the old country a few seeds of Alfalfa. He settled in Minnesota, and the seed was sown and produced exceptionally hardy plants, and when it was eventually recognized as a superior strain, it became known as Grimm Alfalfa. From its adopted home it rapidly spread over the Northwest,

and its superiority is now so generally proven that it is rapidly superseding the Common Alfalfa. We have never known a failure in Michigan of true Grimm. Our Grimm Alfalfa, which is scarified seed, is grown by reputable organizations, and certified by the proper State officers in the state where grown, and guaranteed by them. Write for prices.

ALFALFA, Common Grown in Utah. The fields from which this seed was grown were carefully inspected. The seed is bright and plump, a beautiful golden color; free from dodder and all foul seeds. Scarified and carefully tested for germination. The high altitude of the mountain states insures hardiness. Write for prices.



The CLOVERS

Medium Red or June Clover By far the most important of all clovers for practical purposes. It is a perennial, and grows about two feet high; very valuable for plowing under to enrich the soil, adding humus and nitrogen. We handle only one grade—the best—as it is folly to buy anything else. Sow in Spring or Fall, eight to twelve pounds per acre, if used without other grasses.

Mammoth or Large Red Clover Mammoth Clover is quite distinct from Medium, growing to nearly twice its size; is coarser and a little later. It can be grown successfully on poorer soil than Medium Clover. It is used extensively for building up wornout land. Sow about eight to twelve pounds per acre when sown alone.

Alsike Clover A perennial and the most hardy of all clovers. It prefers damp, loamy soil. It is extremely leafy, making hay of a fine texture. Does not readily winterkill, and is valuable to sow with other clovers and grasses, as it increases the yield of hay. It is the best clover for moist soil. Sow either in Spring or Fall, about six pounds per acre, when sown alone.

Medium
Red Clover.

Right  White Blossom
Sweet Clover.

White Blossom Sweet Clover Once considered a noxious weed; now nearly equal in value to alfalfa. White Sweet Clover is a biennial, and does not last so long as its cousin, alfalfa, but it has a great mission. In pasture it will produce a greater flow of milk than even alfalfa, and as much feed. Cattle are less liable to bloat. Stock soon learn to like the hay, and even prefer it to alfalfa. Write for prices.



Timothy

The most important of all grasses for hay, and is adapted to a wider range of conditions than any other variety of grass. It is the hardiest of all grasses and excels in feeding value. Sow early in the Spring or Fall, 10 to 12 pounds per acre if sown alone; less if mixed with other grasses.

Sudan Grass

A tall annual grass reaching the height of 7 to 9 feet when planted in rows and cultivated, and 4 to 5 feet when sown broadcast. The hay is greatly relished by all stock, and has exceptionally high feeding value. Is adapted to moist soils.

Orchard Grass

This grass grows well in the shade, is rather rank in growth and a stooling variety. Stands the drought remarkably well. Valuable for pasture or orchard. Does well in wet or poor ground and produces large crops of hay.

Millet

A few acres of millet will yield half again as much hay per acre as either clover or timothy, besides it has a greater feeding value and any stock raiser or dairy farmer would be well repaid. When Spring weather is unfavorable, so that other crops fail, or the season is late and wet so that corn will not mature, millet is a sure crop. Millet should be sowed from May to August.

German or Golden Millet

This grows very rank and is one of the best varieties for hay and fodder. On good, rich soil it will make a growth of 4 or 5 feet high. While the hay may seem coarse, nevertheless, it is quite tender if it is cut when in full bloom and even hogs will eat the cured hay quite greedily. A yield of 5 tons per acre is nothing unusual. Sow 3 pecks per acre. German Millet will withstand dry weather remarkably well.

Hungarian Millet

This variety is preferred by some to Golden Millet as it is about a week earlier. Does not grow as large but the hay is more desirable because it is not so coarse. Very nourishing and a wonderful milk producer. A good variety for moist soils.

Soy Beans

When clovers fail it is necessary to have an emergency hay crop which will make hay the same season it is planted. For this purpose Soy Beans are better than the Millet. Soy Beans should be planted in May or June. They withstand drought remarkably well. For hay, silage or green manure crops, plant 1 bushel to an acre if drilled, if planted with a corn planter ½ bushel is sufficient.

Ito San

For Michigan this is one of the best varieties as it matures in 100 days. The plant stands erect, growing about 2 to 2½ feet high and is a good yielder. The beans are medium sized and yellow in color. These are excellent as a catch crop on account of their early ripening.

Manchu

Another early maturing variety that has become popular in all northern sections. It matures at about the same time as the Ito San and is of a stout, bushy growth, standing erect. A large seed yielder and excellent for an early hay and forage crop. This variety is recommended by the Michigan Experiment Station.

Sand Vetch

Sand or Hairy Vetch shares with Sweet Clover the honor of giving the best results in restoring fertility to worn-out land or making poor, sandy soils productive. Sand Vetch has no equal as a cover crop. It can be sown in the cornfield just after the last cultivation, and it will make a mass of green stalks and leaves to plow under about the middle of May; or it may be sown after harvesting oats and plowed for corn the next Spring. Hay made from Sand Vetch is about three per cent higher in protein than Alfalfa hay, and is more eagerly eaten by stock. When sown with oats or any Spring grain, it will come on after crop is harvested and make splendid Fall pasture, and can be plowed under the next Spring for corn or potatoes. Sow from 30 to 40 pounds per acre.

Dwarf Essex Rape

Under favorable conditions Dwarf Essex Rape is ready for pasture in six weeks from the time of sowing. One acre of good rape will carry a flock of a dozen sheep for two months. Recent experiments have shown rape to be the means of producing pork at the lowest cost, even less than alfalfa. Rape is also the forage that can be sown with the least effort. Seeded in corn at the last cultivation to be hogged down, furnishes one of the greatest money-making methods known to the progressive farmer today. Sow rape in corn at the rate of 4 lbs. per acre. When the corn is harvested and cut, then turn the pigs into the field in the Fall. The cost of harvesting is nothing as it is done by the pigs and the pigs put on firm flesh when on rape pasture.

Canadian Field Peas

Valuable for northern climates for cattle feed and when sown with oats make an excellent hog feed. Should be sown early in April, two bushels to an acre. If sown with oats for hay and fodder sow 1½ to 2 bushels per acre.

Rosen Rye

This is the best variety of Winter rye now being grown. The grain is large, plump and of a light color. Straw is strong and stands up well. The heads are long and well filled; an unusually heavy yielder. Sow 1½ bushels per acre.

Silverhull Buckwheat

A standard variety, largely grown, and gives excellent satisfaction. Unsurpassed as a catch crop when a late season has made it impossible to follow out your first plans or when other crops fail. Buckwheat is a valuable crop for those parts of the farm which always seem to be left unplanted at the close of the season. It is generally sown in July and will fill up the vacant plots at a time when all other planting is past. Can be sown after a crop of Winter Wheat or Rye and make a second crop. Use one-half to three-quarters bushel of seed to an acre.

Certified Wolverine Oats

Michigan grown. These oats are medium early, strong and vigorous growers, heavy yielders. The head is full and loose with the seeds evenly distributed around the stem. The straw is of medium height and stiff enough so that they seldom lodge. The grain is large, white, rather blunt and very plump. This variety is grown more extensively in Michigan than any other because it has given such uniformly good yields.

Mammoth Russian Sunflower

A very profitable and important crop. The seed is highly valued by farmers and poultry breeders. The hens will lay more eggs and fatten on it. Single heads will measure 15 to 20 inches in diameter and contain a lot of seed, which can be raised cheaper than corn. Many are now growing Sunflower for ensilage. Sow 3 lbs. per acre.



Leaming Fodder Corn.

Fodder and Ensilage Corn

Dry Fodder Corn is the most satisfactory substitute for hay. It nearly if not quite equals in feeding value timothy and clover. All stock eat it greedily and thrive on it.

It yields from three to five tons of dry fodder per acre, which is a much larger yield than timothy and clover will give, making a far more profitable forage crop to grow.

It can be sown as late as July first, with a reasonable assurance of a fair growth of fodder, making it an ideal catch crop, as the work can be done after haying rush is over. It can be sown at the usual corn-planting time and by sowing rape between the rows after the last cultivation, it makes splendid Summer pasture for hogs or sheep.

Leaming Fodder Corn

This variety is preferred by most dairymen for filling silos, for the reason that the corn matures the large ears (in any ordinary season it will ripen), and gives more grain in the ensilage. Stalks very large and leafy, and grows an immense amount of forage to the acre. It requires from one peck to one-half bushel of seed per acre, drilled in rows one way.

Red Cob Ensilage

A gigantic Southern white corn, producing immensely large ears, rarely maturing in this latitude. The stalks grow from 12 to 15 feet in height, with long, broad leaves from the ground to the tassel. Stalks very thick at the butt, juicy, tender and as sweet as sugar corn; and all stock eat it with relish. Many dairymen prefer it for the silo, for the reason that it produces such an enormous amount of silage (from 15 to 25 tons per acre). It is especially valuable for the dry fodder when cut and kept in the shock until fed. It will produce a good crop of forage, even when sown as late as July. Red Cob Ensilage is one of the best crops to raise for the purpose of killing quack grass or other foul weeds when the land is badly infested. For killing quack grass plow the sod late in the Fall, which, with the freezing of the roots will greatly injure the plants; cultivate with a spring-tooth harrow every week in April and May. Plant Red Cob ensilage in drills, using one bushel of seed per acre, smothering the quack and other weeds. For silos or fodder, sow from one-half to one bushel per acre.

Eureka Ensilage Corn

Will produce more tons of silo corn per acre than even Red Cob Ensilage corn. Stalks will grow 12 to 15 feet in height, with broad leaves from the ground up. Each stalk will bear from one to three long ears. Very rapid grower and can either be planted in hills or in drill rows. Write for prices.



Ensilage Corn. Ten feet tall.

Farm Fertilizers



V. C. Fertilizers

V. C. Fertilizers are well known, well advertised and well recommended, and as all soil requires enough available plant food to produce a maximum crop, we give you below a list of the V. C. Fertilizers which will give an abundance of available plant food and meet your needs as well as give you a bumper crop.

	Nitrogen	Available Phos. Acid	Actual Potash
V-C Phospho Tobacco 16% (300 lbs. Tobacco Stems per ton).....		16	
V-C Potash Phospho Tobacco 14-4 (300 lbs. Tobacco Stems per ton)....		14	4
V-C Ammoniated Phospho Tobacco 2-12-2 (300 lbs. Tobacco Stems per ton)	2	12	2
*V-C Superphosphate 16%		16	
V-C Superphosphate 20%		20	
V-C Superphosphate 24%		24	
V-C Muck Special.....	0	8	32
V-C Plow Brand	0	10	10
V-C Potash Formula	0	14	6
V-C Phosphate & Potash.....	0	20	20
V-C Favorite	2	8	10
V-C Tip Top.....	3	9	18
*V-C Owl Brand	2	12	2
V-C Farmer's Friend.....	2	12	6
*V-C Indian Brand.....	2	16	2
V-C Big Winner	2	16	6
V-C Big Potato & Truck	3	12	4
*V-C Truck Hustler.....	4	10	6
V-C Super 24 Fertilizer.....	4	16	4

BONE GOODS:

V-C Pure Bone Meal (steamed)..... 1 29 0
Analysis marked (*) especially recommended by the State Agricultural Department. Write us for prices.

MURIATE OF POTASH. The best form of Potash for fruit and muck vegetable crops. All root crops draw heavily on the soil for Potash, especially potatoes and onions. Most muck soils are lacking in Potash, and celery will grow a much firmer stalk of far better quality when either a high grade fertilizer, high in Potash, or Muriate of Potash is applied in liberal quantities.

CALCIUM NITRATE, BASF (Nitrate of Lime). Guaranteed 15% Nitrogen, equivalent to 18.2% Ammonia; Nitrate and Lime, two very essential elements combined in one. Highly soluble and quickly available.

NITRATE OF SODA. In its commercial form contains about 15½% of Nitrogen, equal to about 19½% of Ammonia. As the source of Nitrogen or Ammonia, in home mixed fertilizers Nitrate of Soda is the most desirable, particularly for all quick-growing crops, and when early maturity is desired, and when inclement weather is at hand, or frost, Nitrate of Soda will give maturity before the frost really kills.

SULPHATE OF AMMONIA. Used largely in orchards for practically all kinds of fruit; especially valuable for melons and tomatoes, which thrive better in a slightly acid soil. A form of nitrogen which is coming into general use with fruit men and truck growers. It will take the place of Nitrate of Soda to a certain extent, in so far that it is not so quick acting.

LIME. Pulverized Agricultural Limestone is not a fertilizer as it is commonly thought, but is a soil sweetener, and every farmer can insure the constant fertility of his soil by using a little care and "feeding" the soil regularly with the elements needed. One of the most common ailments for lack of fertility in farm land is "ACID SOIL", and it is to correct this condition, to "sweeten" or neutralize acid soil that Pulverized Limestone is used; it has brought bumper crops, money-making crops, on farms that otherwise would be practically worthless. Run down fields where you have been unable to grow alfalfa or clover and where moss, sour grass and thistles thrive, need pulverized limestone.

PULVERIZED HEN MANURE. Contains double the plant food value of Pulverized Sheep Manure and is sold as cheaply. Hen Manure is collected mainly from unloading cars in which poultry have been shipped and is dried and finely ground so that it can be evenly applied and not burn vegetation.

PULVERIZED SHEEP MANURE. This is collected from the Stock Yards, heated to kill weed seeds, finely ground, and forms an excellent fertilizer for lawns, golf courses, garden plots, etc.

SHREDDED CATTLE MANURE. Collected from the stock yards and is finely ground, containing a similar amount of plant food as Pulverized Sheep Manure and is exceedingly good for the humus that it adds to the soil.

OLD GARDENER. This is a properly balanced preparation in which all the elements necessary for plant growth are made available. It contains as high a percentage of nitrogen as can be safely carried in a general-purpose mixture for garden and greenhouse use. It supplies in abundance the phosphates and the potash which are indispensable to healthy plant growth. It also has a physical effect in making stiff soils lighter and more fluffy. Old Gardener is offered as a reliable combination of the materials that have been found best for actual yield, and not merely as conforming to a chemical specification.

MANGANESE SULPHATE. Research shows that manganese is essential in the manufacture of the green color in plants, by the aid of which the most important processes of plant growth operate and is lacking in most soils. Manganese Sulphate is added to mineral fertilizers to supplement this plant food element and has been found very beneficial in growing crops.

We handle large quantities of these fertilizers every year, have a large stock at all times, and ask that we be given a chance to quote you. Write us for prices.

FOR GARDEN AND LAWN FERTILIZERS WE WILL REFER YOU TO PAGES 28-29.

General Supplies

BROOMS. Heavy, with splints suitable for barns, garages, etc. Price, 75c each, not postpaid.

COTTON STRING. 3-ply, white, about 6 balls to the pound. Per lb., 50c, not postpaid.

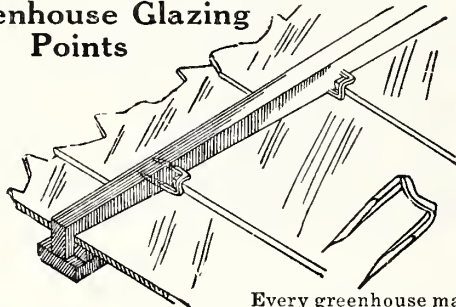
COTTON STRING. 8-ply, white, ½-lb. balls. Per lb., 50c, not postpaid.

CELERY BRAID NO. 13. Red or blue; 1000 yards to a spool; fast colors. Per spool, \$1.25, not postpaid.

CELERY TAPE NO. 17. Red or blue; 1000 yards to a spool; fast colors. Per spool, \$2.25, not postpaid.

PAPER BAGS. For roadside stands or market use, "Tiger Brand." A good quality. These bags can be supplied in the following sizes: 1-lb., 2-lb., 3-lb., 4-lb., 5-lb., 6-lb., 8-lb., 10-lb., 12-lb., 16-lb., 20-lb., and 25-lb. Ask us for prices.

Greenhouse Glazing Points



Every greenhouse man has occasional use for greenhouse glazing points to use in his repair work, as well as new construction.

Van Reyper points, tinned, 9/16-inch size, per carton, 75c, not postpaid.

Van Reyper points, tinned, 5/8-inch size, per carton, 75c, not postpaid.

Zinc points, headed, 6/8-inch size, per carton, 50c, not postpaid.

Putty

ARCO CAULKITE (Formerly Arco 834). Black. A plastic material for glazing and caulking, especially desirable for factory and greenhouse work. Per gal., \$1.75, not postpaid.

ARCO 835. Natural white. A plastic glazing material applied with an Arco glazing gun for glazing and bedding skylight or upright glass in metal or wood sash. Per gal., \$2.35, not postpaid.

GARLANITE. White. This famous glazing compound remains soft and elastic under all conditions, as it is manufactured with special process treated vegetable oils. It is the proven answer to your glazing problems. Per gal., \$2.75, not postpaid.

OLD ENGLISH. Is well known and recommended for bedding glass in sash or for filling cracks or seams in roof joints or frames of greenhouse or hotbeds. This putty is used in machine or bulb and makes a solid bed, impervious to moisture and holds glass in its place, and will stop any crevice or fault. When once set on dry wood it does not heave. Per gal., \$2.50, not postpaid.

GLAZING GUN. Improved style. The barrel is made from heavy gauge seamless steel tubing. Is light in weight (2 lbs.), strong and durable. Will last a lifetime. It saves time and energy. Price, \$5.00 each, not postpaid.

PUTTY BULBS. \$1.25 each, not postpaid.

Fruit Packages

We carry a large stock of fruit packages at all times and are in position to quote you the lowest market prices.

Tub Bushels, Bushels, Half Bushels, Berry Boxes, Crates and Fillers, Picking Baskets, Attractive Roadside Baskets of all kinds.

Give us an opportunity to quote you on a dozen or carload.

Poultry, Bird and Rabbit Supplies



B-K (Bacili-Kil). A powerful disinfectant, antiseptic, deodorant and purifier; valuable in poultry sanitation. 10-oz. bottle, 60c; qt., \$1.25; gal., \$3.00, not postpaid.

CHICK FEEDERS AND FOUNTAINS. Many different styles and sizes. Ask us for description and prices.

COD LIVER OIL—Nopco D. D. (Not U. S. P.). Unfortified, for animal feeding in 30- and 54-gal. drums. Can furnish this in gallon jugs at \$1.50 per gal., or in your own container at \$1.35 per gal. Prices on drums given on application.



POULTRY LEG BANDS—RELIABLE.

Made from aluminum with colored inserts upon which the number is printed. Adjustable to any size. Made in colors: red, green, white, yellow and blue. Numbered, 1 to 25, 60c; 1 to 50, \$1.00; 1 to 100, \$1.90, not postpaid.



POULTRY LEG BANDS NO. 130. Made of sheet aluminum with large, raised numbers. Adjustable to any size fowl. Packed in paper cartons. Numbered 1 to 25, 25c; 1 to 50, 40c; 1 to 100, 65c, not postpaid.

CELLULOID SPIRAL BANDS. Single coil, long lap. Supplied in colors: red, white, yellow, blue and green, and in either Mediterranean or American size. 50 for 50c; 100 for 75c; 250 for \$1.75; 500 for \$3.25; 1000 for \$5.50, not postpaid.



LIBERTY BELLS FOR CANARIES. A song tonic and exerciser. Helps to keep your bird well. Price, 15c each, not postpaid.

SONG RESTORER AND TONIC. An excellent tonic, guaranteed to be "something better." Price, 25c, not postpaid.

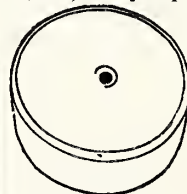
SILVER BIRD GRAVEL. With charcoal. (Washed). Large size can. Price, 15c, not postpaid.

CUTTLEFISH BONE. An absolute necessity for cage birds to supply the salt their systems require and also for sharpening their bills. Equipped with patented holder. Price, 10c each, not postpaid.

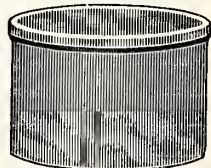
TIX-TON-MIX. For rabbits. Builds up a resistance; antiseptic. An every-day protector against snuffles, colds, intestinal worms, indigestion. 2½-lb. pkg., 75c; 6½-lb. pkg., \$1.50, not postpaid.



RABBIT WATERERS. Crockery bowls 3 in. deep by 5¼ in. diameter. Each, 15c; doz., \$1.50, not postpaid.



RABBIT FEEDERS. Crockery bowls, 2 in. deep by 7¼ in. diameter. Each, 15c; doz., \$1.50, not postpaid.



SALT SPOOLS. For rabbits. Can be nailed to the wall of the hutch—away from the dirt. These come either pure salt or sulphurized. Price, 5c each; 50c per doz., not postpaid.

Above prices are not postpaid, and are subject to market changes.

Insecticides and Fungicides

UNMAILABLE—Insecticides containing POISON, CANNOT be sent by mail—by express only.

Antrol

Ants destroyed. New method "gets" them at their source—safe, permanent, effective. The Antrol system is adapted to any size house or garden and quickly destroys all species of sweets-eating ants. Antrol sets containing 4 containers and 1 4-oz. bottle of syrup, 95c. Antrol extra containers, 15c each. Antrol syrup, 4-oz. bottles, 45c, not postpaid.



★ **ARSENATE OF LEAD.** (Dry). For dusting and spraying. Comes in 1-lb. boxes; 4-lb. bags; and 24-lb. cartons.

"BLACK LEAF 40." A concentrated solution of Nicotine Sulphate containing 40% Nicotine for spraying; also used as a lice control in the hen house by simply painting the roosts. 1-oz. bottle, 35c; ½-lb. bottle, \$1.25; 1-lb. bottle, \$2.50; 2-lb. tin, \$3.75; 5-lb. tin, \$7.00; 10-lb. tin, \$11.85, not prepaid or mailable.



★ **BORDEAUX MIXTURE.** (Dry). The best fungicide for grapes and shrubbery. Packed in 4-lb. bags.

★ **CALCIUM ARSENATE.** (Dry). Packed in 4-lb. bags.



Used as a disinfecting whitewash in cellars, hen-houses, barns. Dusting Carbola on plants, shrubs, gardens for various parasites

has proven successful. 5-lb. box, 75c; 10-lb. box, \$1.25, not postpaid. The Carbola Duster is listed on page 54.

★ **COPPER CARBONATE.** The old standard treatment for smutted grains. Packed in 1-lb. packages.

20-80 **COPPER LIME DUST.** Dehydrated copper sulphate, 20%, (as copper sulphate crystals 28.2%), lime and filler; used principally in the control of celery blight. 10-lb. can, \$1.25; 25 lbs., \$2.60; 50 lbs., \$4.00; 100 lbs., \$7.40, not prepaid.

20-20-60 **COPPER LIME DUST.** Dehydrated copper sulphate 20%, (as copper sulphate crystals 28.2%), calcium arsenate (poison) 20%, lime and filler; used principally as a potato dust. 100-lb. drums, \$10.00, not prepaid.

★ **COPPER SULPHATE** (Blue Vitriol). Crystals, used in making Bordeaux Mixture and especially by celery growers in the control of celery blight. Packed in full barrels of 450 pounds.

★ **KORROSIVE SUBLIMATE.** (Dry). The old reliable treatment for potatoes. Comes packed in 1-lb. boxes.

CROW REPELLANT. Saves replanting and will absolutely prevent crows and other corn pulling birds and animal pests from pulling corn. 8-oz. can, \$1.00, not prepaid or mailable.

CYANOGAS A-DUST. It's the gas that kills them. Garden ants, rats, mice, moles, woodchucks and rodents of all kinds. Very easily applied, with a spoon or duster. ½-lb. can, 45c; 1-lb. can, 75c, not prepaid or mailable. The Cyanogas Duster is listed on page 54.

CYANOGAS G-FUMIGANT for greenhouse fumigation. Simply scatter even on the walks, and close the houses. 5-lb. can, \$3.00; 25-lb. can, \$10.00, not prepaid or mailable.

PARADOW (Paradichlorobenzene). For the control of the peach tree borer. 5-lb. can, \$1.75; 10-lb. can, \$3.00; 25-lb. can, \$7.00, not prepaid or mailable.

★ **DENDROL.** Standard Oil Co. (Indiana). Dormant Spray Oil. An improved Miscible Oil for dormant and delayed dormant spraying of fruit and shade trees and shrubbery. It is specially designed to embody properties essential for use as a spray (insecticide) for the control of those insects susceptible to the action of a material of this class. Dendrol is recommended in the control of San Jose, Oyster Shell, and Scurfy Scale, Apple Aphids (plant lice), Woolly Apple Aphids, Pear Psylla, Red Mite (spider), Fruit Tree Leaf Roller, and many other insects which invade fruit, shade trees and shrubbery. Prices on application.

★ **DUSTING SULPHUR.** A dusting fumigant for the control of mildew.

A non-poisonous insecticide that kills both chewing and sucking insects. Harmless to man, livestock, birds and



pets. Will not burn or harm tender plants or flowers. Safe and pleasant to use. It stays in solution and won't clog sprayers or corrode metal. 1-oz. bottle, 35c; 6-oz. bottle, \$1.00; 16 ozs., \$2.00; qt., \$3.50; gal., \$13.00.



FISH-OIL SOAP. A standard wash for trees and plants where insects and eggs affect the bark. 10-lb. can, \$2.25, not prepaid.

GRASSHOPPER POISON. A citrus and arsenical combination for the control of grasshoppers. To be mixed with bran or alfalfa meal to make a mash which is readily eaten. 5-lb. can, \$1.50, not prepaid or mailable.

★ **IRON SULPHATE.** Used to rid your lawn of dandelions. It is not injurious to blue grass or other narrow-leaved grasses, but will temporarily discolor clover lawns. It has some fertilizing properties besides being an eradicator and does not poison the lawn; also used to prevent burning in lime and sulphur solution for the summer spray on fruits. Full directions and price given on application.

K. R. O. (Kills Rats Only). Very effective and sure death to rats and mice, harmless to humans, pets or barnyard stock. 2-oz. can, 75c, not prepaid.

★ **LIME AND SULPHUR SOLUTION.** The old reliable spray for San Jose Scale. Comes in barrel lots only.

★ **DRY LIME-SULPHUR.** Packed in 1-lb. pkgs.; 5-lb. bags; 12½-lb. bags, and 200-lb. drums.

★ **MULSOID-SULFUR.** The finest Summer sulphur spray for peaches. 95% sulphur. Packed in 4-lb. bags.



"**NICOFUME**" LIQUID. Nicotine Solution for fumigating or spraying. A highly refined solution of "free" Nicotine, containing 40% of Nicotine. ¼-lb. tin, 75c; 1-lb. tin, \$2.00; 4-lb. tin, \$6.25; 8-lb. tin, \$11.50.

NICOFUME TOBACCO POWDER. For fumigating greenhouses. 1-lb. tin, \$1.00; 5-lb. tin, \$3.75; 10-lb. tin, \$6.85.

★ **NICOTINE DUST.** 4%; for the control of plant lice in the greenhouse or out-of-doors. Packed in

5-lb.; 10-lb.; 25-lb.; 50-lb.; and 100-lb. drums. **NICOTROL.** An activated nicotine spraying preparation made by combining nicotine and Penetrol. For most aphids use 1 quart for 50 gallons spray. Per qt., \$1.25, not prepaid.

★ On such items on which the price has not been established when this catalog goes to press, we have not quoted, but will ask that you permit us to quote you prices on application.

Insecticides and Fungicides

UNMAILABLE—Insecticides containing POISON, CANNOT be sent by mail—by express only.

PARIS GREEN. A poisonous insecticide for chewing insects. $\frac{1}{4}$ lb., 20c; 1 lb., 60c; 5 lbs., \$2.50, not prepaid.

PENETROL. An activator for nicotine spraying solutions and a better control of aphids at a lower cost of spray. Use 1 quart for 50 gallons spray, adding 12 teaspoons nicotine 40%. Per qt., 75c, not prepaid.

PESTROY is a combined insecticide and fungicide. It is designed for the control of many chewing insects and fungous diseases. Can be used as a dust or liquid spray which makes it additionally attractive for general use. 4-lb. bag, \$1.60; 1-lb. shaker can, 50c, not prepaid.



SLUG SHOT (Hammond's). An old reliable insecticide for the control of potato bugs, as well as those on tomatoes, and eggplants, cabbage lice and worms. Guaranteed. 1-lb. package, 20c, not prepaid.

★ **SODIUM CHLORATE.** A chemical weed killer for the control of quack grass, Canada thistle. Will kill all vegetation but as it is not a poison it does not harm the soil permanently. Full directions and price given on application.

CERESAN. A dust disinfectant for wheat, oats, barley and certain other cereals. 8-oz. tin, 50c; 1 lb., 75c; 5-lb. tin, \$3.00; 25-lb. pail, \$12.50.

Du Bay seed disinfectants are poisonous, and owing to present postal regulations, cannot be sent through the mails, but must be sent by freight or express.

Illustrated booklets on the use of these disinfectants may be had upon request.

SHEPS PLANT SPRAY. An effective non-poisonous solution that kills and controls both chewing and sucking insects. Absolutely the easiest spray to mix, no soapsuds, perfect emulsion 20 seconds from bottle to plant. 2-oz. bottle, 35c; 8-oz. bottle, 75c; pint, \$1.25; quart, \$2.00; gallon, \$6.35; 5 gallons, \$30.00, postpaid.



SEMESAN. A mercuric seed disinfectant and plant stimulant. Important for the control of damping-off of seedlings and disinfecting seed bed soil. 2 ozs., 50c; 8 ozs., \$1.60; 1 lb., \$2.75, not prepaid.

SEMESAN JR. A superior disinfectant for seed corn. 4-oz. tin, 50c; 1 lb., \$1.75, not prepaid.

SEMESAN BEL. An instantaneous dip for seed potatoes. 4-oz. tin, 50c; 1 lb., \$1.75; 5 lbs., \$8.00.

Snarol

The National Pest Control

Snarol is a ready prepared meal that you simply broadcast on the ground, under the vegetation. Cutworms, sow bugs, slugs, earwigs, snails, grasshoppers, etc., are exterminated. These pests eat the meal and are quickly destroyed. Snarol will not deteriorate from rain or sprinkling, and also is non-injurious to vegetation when used according to simple directions. 1-lb. pkg., 45c, not postpaid.



TANGLEFOOT STOCK SPRAY. For dairy and general farm use. Repels and kills flies and insects which annoy or irritate stock. 1-gal. can, \$1.50.

TREE TANGLEFOOT. A perfect safeguard for trees. 1 lb., 60c; 5 lbs., \$2.75; 10 lbs., \$5.25; 25 lbs., \$11.00, not prepaid.



VOLCK. Effective, safe and easy to use. An oil spray for the control of all pests. Can be used on the tenderest plant with absolute safety. Volck is odorless, colorless and non-poisonous. $\frac{1}{2}$ -pt. can, 50c; 1-qt. can, \$1.00; 1-gal. can, \$3.00, not prepaid.

TOBACCO DUST. (Regular grade). 5c per lb.; \$1.00 per 100 lbs., not postpaid.

★ **TOBACCO STEMS.** A greenhouse nicotine fumigant. Regular bales, 500 lbs.

Gator Hide Mulch Paper

A new method of planting that produces bigger, better, and earlier crops. Eliminates practically all cultivating and weeding. It will increase crop yield. It will enable you to harvest crops from one to two weeks earlier than unmulched crops in your neighborhood. Made in two types and two widths.



Type A—for ANNUALS—primarily in field culture:

18" width—900 linear feet to the roll\$3.50

36" width—450 linear feet to the roll 7.00

Type B—for PERENNIALS in field culture and ALL garden work:

18" width—450 linear feet to the roll\$3.50

36" width—900 linear feet to the roll 7.00

Ask for your copy of the booklet "The Miracle of Mulch Paper," mailed free upon request.

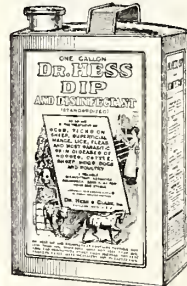
The Dr. Hess Line

Promotes health and thrift in stock and poultry.

POULTRY PAN-A-MIN (Panacea). Gives good health and good feeling to your flock. It starts the eggs and keeps them coming. 3-lb. pkg., 50c; 7-lb. pkg., \$1.00; 15-lb. pkg., \$2.00; 25-lb. pkg., \$3.00.

STOCK TONIC. More milk from your cows, more pounds of pork, and ailing animals made healthy. 5-lb. pkg., 75c; 15-lb. pkg., \$2.00; 25-lb. pkg., \$3.00.

INSTANT LOUSE KILLER. Kills lice, ticks, fleas, bugs and slugs. Use it on poultry, animals and vegetables. 1-lb. pkg., 25c.



DIP & DISINFECTANT. Destroys hog lice, mites, fleas, ringworms, ticks, scab, etc. The cheapest and the best. 1 qt., 60c; $\frac{1}{2}$ gal., \$1.00; 1 gal., \$1.75.

POULTRY TABLETS (Formerly Roup Tablets). 100 tablets, 50c; 225 tablets, \$1.00.

CHICK TABLETS (Formerly White Diarrhoea Tablets). 100 tablets, 50c; 225 tablets, \$1.00.

FLY CHASER. Has the odor of the pines. More milk, more beef, better working animals. $\frac{1}{2}$ gal., 90c; 1 gal., \$1.50.

★ On such items on which the price has not been established when this catalog goes to press, we have not quoted, but will ask that you permit us to quote you prices on application.

A full line of DUSTERS and SPRAYERS will be found on page 54.

Skinner Irrigation Equipment and Supplies

In buying irrigation equipment, as in buying any piece of machinery, attention should be given to the details of design and construction that are indicative of good equipment.



Field Nozzle.



Greenhouse Nozzle.

The Skinner System is one of the most improved methods of irrigation, and is used outdoors on gardens, lawns, etc., as well as for greenhouse work.

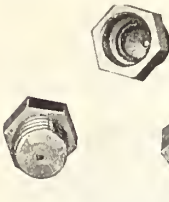


Catfish Pattern.



Nozzles

Silver Stream Outdoor	\$0.06
Silver Stream Inlet 50° Deflector .....	.08 1/2
Strainer Inlet 50° Greenhouse .....	.10 1/2
End Nozzle—Non-Shut-Off .....	.15
End Nozzle—Shut-Off .....	.85
March Greenhouse—Screened .....	.13
March Greenhouse—Not Screened .....	.08
March Field—Screened .....	.11
March Field—Not Screened .....	.06
Maid of the Mist Nozzles .....	.15
Catfish Nozzles .....	.15
Plugs .....	.05



Silver Stream Nozzles.



ST50

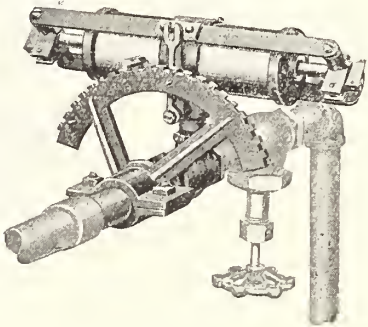


Indoor Nozzle.



Automatic Oscillators

It simplifies watering. All you do is start and stop the motor. Price \$25.00, plus the cost of brass turning union required as listed on this page under "Turning Unions."



Turning Unions

Galvanized with Brass Nipples	Tee	Cross
E—Unions—1" Inlet; 3/4" or 1" Outlet	\$2.70	\$3.15
N—Unions—1 1/4" Inlet; 1 1/4" Outlet	3.75	4.00
R—Unions—1 1/2" Inlet; 1 1/2" Outlet	4.25	4.95
S—Unions—2" Inlet; 2" Outlet	5.20	6.20
All Brass, No Strainer—	Tee Only	
3/4" Inlet; 3/4" Outlet	\$2.50	
1" Inlet; 1" Outlet	3.50	
1 1/4" Inlet; 1 1/4" Outlet	4.50	
1 1/2" Inlet; 1 1/2" Outlet	4.95	

Supplies and Repairs

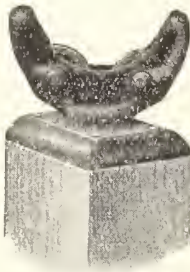
Model "B" Drilling Machine	\$17.50
5/16-24 Large Tap Drills .....	.65
Chuck and Shaft for Drilling Machine	1.50
3/4" Automatic Flush Valves	2.25
3/4" Flush Valves	1.25
Galvanized Caps Only for 1" Turning Union .....	.60
Galvanized Caps Only for 1 1/4" Turning Union .....	.70
Galvanized Caps and Brass Nipple with Ring and Packing Complete for 1"	1.60
Galvanized Caps and Brass Nipple with Ring and Packing Complete for 1 1/4"	1.90
Nipples, Brass Only for 1" Union .....	.55
Nipples, Brass Only for 1 1/4" Union .....	.75
Couplings, Quick Acting, 3/4" .....	.95
Couplings, Quick Acting, 1"	1.25
Screens for 1" Union .....	.24
Screens for 1 1/4" Unions .....	.28
Screens Only for Nozzles .....	.05
Rings, Brass, for 1" and 1 1/4" Unions .....	.15
Packing for 1" and 1 1/4" Union—Set .....	.15



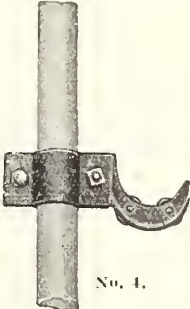
No. 1.



No. 2.



No. 3.



No. 4.

No. 1—Pipe Hangers—Suspension	Each
No. 2—Pipe Hangers—Pipe Post, Top	\$0.28
No. 3—Pipe Hangers—Wood Post, Top .....	.33

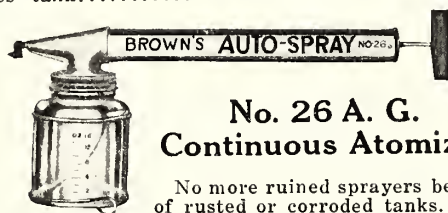
No. 4—Pipe Hangers—Pipe Post, Side:	Each
3/4", 1", 1 1/4" Pipe .....	.35
1 1/2" and 2" Pipe .....	.40

We would like to have you call and see us about this system. Tell us your plans. All prices quoted on this page f. o. b. Grand Rapids and subject to change without notice.

No. 9 Auto Spray

Auto-Spray No. 9 with the corrugated tank is the most modern and up-to-date sprayer on the market. Will handle all spraying solutions. Recommended for small trees, field and garden crops, poultry houses, vines, etc. Has all the Brown improvements. Extra strong corrugated tank, both brass and galvanized. 22-inch brass extension, non-clog nozzle with 3 sizes brass nozzle discs for different sprays. Air pump one piece solid brass, check valve all brass—no rubber or leather, cannot rust or deteriorate. Hole in bottom flange to hang sprayer upside down for complete drainage. All these improvements at no extra cost. The best sprayer that money can buy.

Each
Galvanized tank \$6.75
Brass tank 10.50



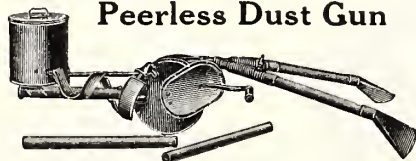
No. 26 A. G. Continuous Atomizer

No more ruined sprayers because of rusted or corroded tanks. This glass tank continuous atomizer is the newest and most practical sprayer of its kind. The jar has standard Mason thread and any fruit jar can be used. Operator can always see the exact amount of liquid in the reservoir and wide mouth opening makes easy filling and cleaning. Sprays on both up and down stroke and maintains a constant mist with very little effort. Strongly made and will last for years. Lithographed tin pump, glass jar tank, one quart, price \$1.25 each.

"The Whirlwind"

"THE WHIRLWIND" is a strong, well balanced single acting sprayer. Capacity of reservoir is 1 quart. Pump is 12" long, and 1 1/4" in diameter. Pump barrel is lithographed. The dome filler cap screws into a brass filler thread. This brass connection noticeably increases the life of this sprayer. Whirlwind, 1 quart, all tin, each 50c.

Peerless Dust Gun



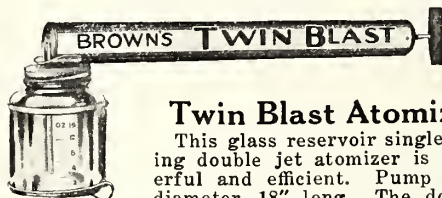
Evenly balanced so as to distribute the load. Built for service and gives satisfaction. The parts are interchangeable and any combination can readily be made, such as, set up for dusting trees, one-row dusting, two-row dusting as shown in illustration, dusting underneath foliage, and also dusting in burrows. NO. 2-R. For dusting two rows as shown \$22.50
NO. B.A. With beetle attachment to dust underneath the foliage 25.00

Brown's Auto-Spray No. 50

The same high quality material and workmanship as No. 9 but with smaller tank capacity. Holds 2 1/2 gallons and is a very convenient machine for women.

Handles all spraying solutions at high pressure and is recommended for small trees, truck and home gardens, vines, chicken houses, etc. Pump has all metal check valve and is of one piece seamless brass. Every sprayer is equipped with 18" brass extension with elbow for spraying under side of leaves. A complete and thoroughly practical sprayer.

Each
Galvanized tank \$6.00
Brass tank 9.00



Twin Blast Atomizer

This glass reservoir single acting double jet atomizer is powerful and efficient. Pump 1 1/4" diameter, 18" long. The double siphon tubes throw a large blast of fine spray. Excellent sprayer for cattle fly spray and all around spraying. Drip cup in can top. Jar has Mason thread and any fruit jar can be used. Metal parts are of extra heavy tin plate. Brown's Twin Blast, one quart, each 75c.

Carbola Duster

The Carbola Duster is the last word in dusters. The nearest thing to the Carbola Duster sells for \$2.00. This costs but \$1.25.



The Carbola Duster is 17 inches long and is enameled by a special baking process. It holds an exceptionally large quantity of powder and has a large screw cap that is easy to open and close. There is no part that can wear out, and this duster will last a lifetime with ordinary usage. It is adapted for dusting all dry powders, insecticides and fungicides. Price, \$1.25.

No. 1—Special Hand Duster



For Applying Cyanogas A-Dust
Price, \$1.00 each.

A small hand duster for applying Cyanogas A-Dust to rat holes, groundhog burrows and mole runways. Provided with rigid and flexible extension tubes to facilitate application of dust on small rat and mole infested areas. This duster may also be used with any insecticide dust, by removing the extension tube.

ORDER SHEET—Continued

[illegible]

SPECIAL NOTICE:

We shall esteem it a great favor if you will give us in the spaces below the NAMES AND ADDRESSES of any Private Gardeners or Truck Farmers among your acquaintances. We wish to send them our SEED ANNUAL.

[illegible]

Garden Seeds

While the pages of this catalog give you a full description of our garden seeds, may we refer you to a few items that we have added in the hopes of giving you something better, and are worthy of your consideration.

CARROT. Red Cored Chantenay. A superior early bunching Carrot. The color is a rich orange and the cores are small and nearly the same color. Considered the best variety for the market gardener and shipper. Fully described on page 8. Oz., 20c; $\frac{1}{4}$ lb., 60c; 1 lb., \$2.00, postpaid.

LETTUCE. White Boston. Has a fine, large, solid head, light green outer leaves, but does not have the brown edges. A tightly folded heart that blanches to a bright, creamy, yellow shade. It is sweet and crisp. Also described on page 14. Oz., 20c; $\frac{1}{4}$ lb., 60c; 1 lb., \$2.00, postpaid.

PEPPER. Long Red Chili. $\frac{1}{2}$ inch in diameter, four to five inches long; earlier than the Cayenne, hot and pungent. Listed with the other peppers on page 19. Oz., 50c; $\frac{1}{4}$ lb., \$1.50; 1 lb., \$5.00, postpaid.

SWEET CORN, Golden Gem. Absolutely new. A valuable early yellow Corn. Same size as the Golden Bantam, and being an 8-rowed corn, it is the earliest of all yellow corns, being nearly two weeks earlier than Sunshine. Full description on page 11. $\frac{1}{4}$ lb., 40c, postpaid. 10 lbs., \$3.50; 25 lbs., \$8.00; 100 lbs., \$30.00, not prepaid.

ONION—Riverside Sweet Spanish (Valencia). Nearly globular in form, resembling "Prize-taker," but grows to a larger size. A good keeper as well as shipper. Complete description will be found on page 17. Oz., 30c; $\frac{1}{4}$ lb., 90c; 1 lb., \$3.00, postpaid.

ONION—White Barletta. One of the earliest, handsomest, and smallest of the white pickling onions. Described on page 17. Oz., 30c; $\frac{1}{4}$ lb., 90c; 1 lb., \$3.00, postpaid.

Flower Seeds

KOCHIA CHILDSI (A). (Burning Bush). It resembles a close clipped ornamental Evergreen, growing about $2\frac{1}{2}$ feet high, pleasing light green in color. In early autumn the whole bush becomes carmine or blood-red. Described on page 37. $\frac{1}{2}$ oz., 15c; Pkt., 10c.

RED HOT POKER (P) (Tritoma). A very handsome and showy border plant. Flowers are borne in compact form on stout 3- and 4-foot stems. Early flowering. Described on page 41. $\frac{1}{4}$ oz., 50c; pkt., 10c.

NICOTIANA (A). (Sweet Scented Tobacco Plant). Very easy to raise and most effective. The flower is very much like the Petunia, but with a longer tube. The flowers open toward evening and emit a powerful perfume. Very bushy, carrying their flowers in clusters. Listed on page 38. Affinis Hybrids—mixed colors. $\frac{1}{4}$ oz., 20c; Pkt., 10c.

While we do not put out packet seeds, we do, for our own convenience, put up packets of flower seeds out of our bulk seeds, and you can rest assured that all of our seeds are thoroughly tested for vitality as well as germination and the varieties of annuals that we offer will add to the charm of any garden, enhancing both beauty and color.

Our Prize Winning Collection

Our prize winning collection offered below is made up of the common varieties of annuals that will thrive in any garden, giving you color and beauty in abundance. The list follows:

1 pkt. Asters	1 pkt. Mourning
1 pkt. Bachelor's Buttons	Bride
1 pkt. Candytuft	1 pkt. Phlox
1 pkt. Cosmos	1 pkt. Pinks
1 pkt. Heliotrope	1 pkt. Poppies
1 pkt. Larkspur	1 pkt. Nasturtium
	1 pkt. Snapdragon

**12 Large Size
Packets
Postpaid \$1**

We have not designated any particular variety but please specify what you want and we will be glad to supply. If it is left to our judgment, we will send you a collection that we know will please you.

This list is given you only as a suggestion and if you desire you may pick any 12 packets of flower seeds for \$1.00, as found on pages 31 to 44 of this catalog.

VEGETABLE SEEDS FOR YOUR GARDEN ARE FULLY DESCRIBED ON PAGES 4 TO 27. BE SURE TO NOTICE OUR SPECIAL \$1.00 COLLECTION ON PAGE 21.

Grand Rapids Growers, Inc.

*Originators and Growers
of the
Grand Rapids Forcing
Varieties*

Seeds Merchants

401-411 Ionia Avenue, S. W.
GRAND RAPIDS, MICH.